

**Defense Nuclear Facilities Safety Board**  
**Recommendation 94-4**  
*Deficiencies in Criticality Safety*  
*at Oak Ridge Y-12 Plant*



**November 9, 1995**

**Assessment Report**  
**of**  
**Lockheed Martin Energy Systems**  
**Conduct of Operations**

# LMES Y-12 COO Assessment Team

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## Summary

This is the Assessment Report of Lockheed Martin Energy Systems (LMES) Conduct of Operations at the Oak Ridge (OR) Y-12 Plant. The assessment was conducted in accordance with requirements of the Department of Energy (DOE) Implementation Plan (94-4 IP) for DNFSB Recommendation 94-4. This is one of several assessment activities described in the 94-4 IP and is listed as Task 4 Conduct of Operations.

The LMES Conduct of Operations Assessment was conducted from October 30 through November 8, 1995 in conjunction with a similar Federal Conduct of Operations assessment conducted by an independent DOE team. The activities of the two teams were coordinated and information was exchanged to increase efficiency, as well as reduce unnecessary duplication in the separate reports generated.

The Y-12 Site is a government owned, contractor-operated facility located in Oak Ridge, Tennessee. For many years, the primary mission at Y-12 was the production of uranium weapons components. In recent years, Y-12 has been assigned roles in support of stockpile reduction initiatives. Operations recently resumed in the Receipt, Storage, and Shipment (RSS) facilities after completion of a Readiness Assessment (RA) conducted by DOE in accordance with DOE 5480.31. Operations also resumed in the Depleted Uranium Operations (DUO) facilities, as a result of a Management Self Assessment approved by the Y-12 Site Office (YSO).

The objective of the Y-12 Conduct of Operations Assessment was to evaluate the Conduct of Operations Program, Program Implementation, and the effectiveness of corrective actions taken based on observed activities. The criteria for this Assessment were based on DNFSB Recommendation 94-4 and actions from the supporting Implementation Plan. The Assessment was performance-based and employed the judgement of experienced technical experts in assessing the implementation of the Conduct of Operations requirements of overall management and operations. Team members had experience with the 1994 Pantex Conduct of Operations Assessment, and all have had extensive Conduct of Operations implementation experience at Rocky Flats, Pantex Plant, or Savannah River Site.

The Assessment methodology included the following:

- Reviews of existing Conduct of Operations related documentation
- Documentation reviews of the September 22, 1994, Critical Safety Approval (CSA) incident at Y-12
- Subsequent CSA corrective action
- Interviews and discussions with various levels of management
- Interviews with workers
- Observation of operational activities in the facilities resumed
- Facility tours
- Procedure walkdowns

- **Drills**
- **Training**
- **Surveillances**

**The Team was charged by the Team Leader to provide as much advice and training as possible to Y-12 personnel, so that Y-12 could receive the benefit of the Team's collective experience with implementing Conduct of Operations at other DOE facilities. The results of this Conduct of Operations Assessment includes 6 Noteworthy Practices, 29 Findings, 30 Concerns, and 19 Observations. These will contribute to the basis for development of the combined Y-12 Corrective Action Plan.**

**The Y-12 Plant is in the early stages of implementing a Plant Conduct of Operations Program. Progress to date in implementing a sufficient level of Conduct of Operations in RSS and DUO has been effective. Several deficient areas, identified during the Assessment, are detailed in the body of the Report. These were:**

- **Continuing CSA infraction incidents indicate that the depth of the fundamental problem is significant and that corrective actions to-date have not been comprehensive enough to achieve effective resolution.**
- **The Conduct of Operations Matrix of Applicability and Associated Implementation Plans need to be developed for the Plant.**
- **Management assessments need to be conducted to meet fundamental Conduct of Operations requirements for promoting immediate and continuing improvement.**
- **The DOE YSO Monthly Assessment Reports for operational facilities are not being acted upon by Y-12 LMES management.**
- **Occurrence reporting does not meet DOE 5000.3B requirements in that routinely occurring procedural violations and items of management interest are under reported.**
- **Round taking effectiveness is not adequate for inspecting tags and locks nor for inspecting for CSA noncompliance.**
- **A Plant Conduct of Operations Manual has not yet been developed.**
- **Communications practices at the Plant do not meet Conduct of Operations requirements.**
- **There are numerous housekeeping and inadequate lighting deficiencies throughout the Plant facilities.**

- **A well-founded continuing training program for workers, salaried employees, and management personnel needs to be implemented in order to effectively implement Conduct of Operations.**
- **Lockout-Tagout is deficient in that the verification requirements of the DOE Standard for Lockout-Tagout are not implemented.**

**In conclusion, there has been overall effective progress to-date implementing Conduct of Operations in RSS and DUO. The deficient areas identified will require significant work to move the entire Plant to the required level of Conduct of Operations performance. Of first importance is for Y-12 to fully understand the depth of CSA infraction incidents and to take more effective corrective action, both near-term and long-term.**

**Based on the overall evaluation of this Assessment, Y-12 LMES management is on the right track to achieve a satisfactory Conduct of Operations Program. There were several notable observations. Mentoring has been effective at the floor level. The attitude and sense of ownership by the workforce are very positive. Staffing adjustments are being made to effect expansion of Conduct of Operations plant wide. Plant personnel can be helped by observing other site programs and by importing effective programs from other DOE facilities. Additionally, follow-up performance-based assessments conducted periodically could be helpful for the Plant as it develops and revises programs during the Plant-wide Conduct of Operations implementation.**

**Noteworthy practices, findings, concerns, and observations are listed on the following pages.**

**Noteworthy Practices:**

1. The pre-evolution brief for the material move on 11/1/95 was very good. C-COO-2/9204-4 QE-6.
2. A work assignment sheet is used to acknowledge expectations about performance. C-COO-2/9204-4 QE-7.
3. The response to CSA violation demonstrated an understanding of CSA requirements and prompt corrective action in one facility. C-COO-2/9204-2E-1.
4. Conduct of Operations implementation approach by Steam Plant management is commendable. C-COO-2/Support-7.
5. Pre-Shift briefings in 9215 EUTO were well conducted. C-COO-2/EUTO-8.
6. There has been an effective Mentor Program in 9215 EUTO. C-COO-2/EUTO-9.

**Findings:**

1. The Y-12 Lockout/Tagout Program does not meet today's DOE-wide practice in that appropriate verification is not required. C-COO-1/Lockout-Tagout-1.
2. Shift manager and shift technical advisor qualification process is not documented. C-COO-1/Training and Drills-1.
3. The Public Address system is not used effectively. C-COO-2/EUTO-1.
4. Voice communications are informal and not precise. Repeatbacks are neither used nor required. C-COO-2/EUTO-2.
5. Four potential CSA violations were found in 9201-5, third floor laydown area. C-COO-2/DUO-1.
6. A number of Radiological Control deficiencies were noted. C-COO-2/DUO-2.
7. Some electrical controller doors are not routinely fastened after maintenance. C-COO-2/DUO-3.
8. Material conditions in the equipment spaces of 9998 and on the roof of 9998 were poor. C-COO-2/DUO-4.
9. Daily round sheets were not reviewed weekly as required. C-COO-2/DUO-5.
10. Housekeeping in 9201-5 had deteriorated to the point that personnel making rounds were insensitive to safety concerns. C-COO-2/DUO-6.
11. Locking devices used in one lockout/tagout were improperly installed. C-COO-2/Lockout-Tagout-1.
12. Continuing training is not being conducted in accordance with Chapter 12 of the Nuclear Operations Conduct of Operations Manual. C-COO-2/Training and Drills-1, 8.
13. Personnel serving as shift manager and shift technical advisor are not formally qualified. C-COO-2/Training and Drills-2.
14. Training is not effective in helping operators retain important information. C-COO-2/Training and Drills 4.
15. Fire Department records of fire extinguisher inspections are less than adequate. C-COO-2/Support-1.



16. Many deficiencies were observed in radiological control practices. C-COO-2/Support-2.
17. Conduct of Operations performance for support group personnel not assigned to Nuclear Operations is deficient. C-COO-1/Support-1.
18. The Plant Conduct of Operations Matrices of Applicability and Implementation Plan has not yet been developed as required in DOE Order 5480.19. C-COO-1-1.
19. Line Management is not conducting routine Conduct of Operations Assessments as required by the Y-12 Plant Management Assessment Program (Y60-028) requirements and DOE Order 5480.19. C-COO-1-2.
20. Occurrence reporting does not meet DOE Order 5000.3B requirements. C-COO-1-4.
21. The Nuclear Operations Conduct of Operations Manual chapter on rounds does not incorporate the requirements to inspect for correct placement of tags and locks. C-COO-1-5.
22. Performance goals as required by DOE Order 5480.19 and the Nuclear Operations Conduct of Operations Manual are not currently being maintained as required by the Order and Manual. C-COO-1-8.
23. The Lockout-Tagout system in building 9720-5 is not periodically inspected as required by DOE Order 5480.19, Chapter IX. C-COO-2/9720-5-1.
24. Operator rounds do not inspect for correct placement of tags and locks as specified in DOE-STD-1030-92, Guide to Good Practices for Lockouts and Tagouts. C-COO-2/9720-5-1.
25. The corrective actions taken to correct the root causes of the September 1994 CSA incident have not been effective in all nuclear operations areas. C-COO-3-1.
26. There are no maintenance procedures in place or scheduled to be developed to support operations or equipment in 9215/9204-2E. C-COO-1/DUO-2.
27. Bi-monthly inventories have not been completed for 9204-2E since July 1995. C-COO-2/9204-2E-3.
28. The self assessment program in 9204-2E lacks management participation and is not performance based. C-COO-2/9204-2E-5.

**Concerns:**

1. Specific responsibilities and actions required to implement Conduct of Operations Manual chapter requirements in facilities have not been fully developed. C-COO-1/9204-4-1.
2. LMES should review Conduct of Operation Chapters 3 and 13 for applicability to all facilities. C-COO-1/DUO-1.
3. The site lacks infrastructure to support an effective training program. C-COO-1 Training and Drills-2.
4. A support group pre-evolution brief was less than adequate. C-COO-2/9204-4 QE-1.
5. Material conditions exist that affect safety. C-COO-2/9204-4 QE-2.
6. Plan of the day meetings are not consistent across the plant. C-COO-2/9402-2E-2.
7. Training is not formally conducted. C-COO-2/Training and Drills-3.
8. Drills need improvement. C-COO-2/Training and Drills 5,6,7.

9. The revision process for CSAs does not contain sufficient documentation and review of changes. C-COO-2/Procedure Program-1.
10. The CSA validation process is not sufficiently rigorous to ensure facility compliance with assumptions. C-COO-2/Procedure Program-2.
11. CAAS surveillance source poses an ALARA concern. C-COO-2/Support-3.
12. Contaminated transport trucks pose an ALARA concern. C-COO-2/Support-4.
13. No corrective action plans have been presented to address training deficiencies. C-COO-3/Training and Drills-1.
14. Implementation of the procedures program does not completely address identified deficiencies. C-COO-3/Procedure Program-1.
15. Unique Process and Control Areas should be reviewed for applicability to the facility. C-COO-1/9204-2E-1.
16. Surveillance of dry chemical fire extinguishers may not ensure operability. C-COO-2/Support-8.
17. The Training Program does not take credit for actual events. C-COO-1/Training and Drills-3.
18. The Lockout/Tagout program does not specify frequency of periodic inspections. C-COO-1/Lockout-Tagout-2.
19. Some deficiencies were noted during placement of lockout/tagout. C-COO-2/Lockout-Tagout-2.
20. An applicability matrix for 9215 EUTO is not filed in the shift manager's or operations manager's Conduct of Operations Manual. C-COO-1/EUTO-1.
21. Many material deficiencies exist in DUO facilities. C-COO-2/DUO-7.
22. Pre-shift briefings need improvement. C-COO-2/EUTO-3.
23. EUO Timely Order effectiveness needs improvement. C-COO-2/EUTO-4.
24. Workers need to record unusual items in the remarks section of the roundsheets. C-COO-2/EUTO-5.
25. DOE Monthly assessments are not acted upon by management. C-COO-1-3.
26. Communications practices are not in conformance with DOE Order 5480.19, Chapter IV. C-COO-1-9.
27. General lighting in many facilities is inadequate. C-COO-1-6.
28. Plant Conduct of Operations Manual has not yet been developed. C-COO-1-7.

**Observations:**

1. A communications method is needed in operations areas not covered by the announcing system. C-COO-21/9204-4 QE-3.
2. Conduct of Operations assessment by mentors agrees with assessment team conclusions. C-COO-2/9204-4 QE-4.
3. Radiological control area entry point deficiencies. C-COO-2/9204-4 QE-5.
4. Radiological control practices were inconsistent. C-COO-2/Support-5.

5. **Radiological control support is inadequate. C-COO-2/Support-6.**
6. **Corrective action plans are not appropriate for deficiencies in that no action plans are available for review. C-COO-3/Support-1.**
9. **Record of lockout/Tagout audits for 9720-5 could not be located. C-COO-2/Lockout-Tagout-3.**
10. **Review of Lockout/Tagout Log in 9998. No deficiencies were noted. C-COO-2/Lockout-Tagout-4.**
11. **Procedures development and labeling were reviewed and found to be well coordinated and effective. C-COO-2/DUO-8.**
12. **Review of the Casting Furnace startup evolution was presented in a formal and professional manner. C-COO-2/DUO-9.**
13. **Ladder not available to verify leakage from EUO line. C-COO-2/DUO-10.**
14. **Conduct of Operations assessment by mentors agree with the Team's conclusion in DUO facilities. C-COO-2/DUO-11.**
15. **Conduct of Operations assessment by mentors agree with the Team's conclusion in EUTO. C-COO-2/EUTO-6.**
16. **The monthly audio test of the criticality accident alarm system was postponed appropriately. C-COO-2/EUTO-7.**
17. **Routine activities impacting Conduct of Operations are not standardized. C-COO-1-10.**
18. **Corrective action items from Y/NO-00002 and -00003 were not all clearly defined and effectively progressing toward closure in DUO facilities. C-COO-3/DUO-1.**
19. **Conduct of Operations implementation status in the warehouse is adequate. C-COO-2/9720-5-2.**

## 1.0 Background

On September 27, 1994, the Defense Nuclear Facility Safety Board (DNFSB) issued Recommendation 94-4, which involved criticality safety deficiencies observed at the Oak Ridge Y-12 Plant. The Recommendation described a September 22, 1994, event in which members of the DNFSB staff noted discrepancies between the Criticality Safety Approval (CSA) requirements and the configuration of storage arrays while observing the unloading and storage of a weapon component. In responding to this identified violation of nuclear criticality safety limits, Department of Energy (DOE) and LMES personnel failed to take appropriate corrective actions in accordance with site procedures. Following the event, the operating contractor, Lockheed Martin Energy Systems Inc. (LMES), stopped nuclear operations at the Y-12 Plant.

The DNFSB Recommendation 94-4 stated that reviews of adherence to nuclear criticality safety limits at the Y-12 Plant revealed widespread noncompliance. The Recommendation also identified weaknesses in key areas of the criticality safety program including procedures and Conduct of Operations, as well as DOE and LMES experience, training, qualifications, and performance. In response to the DNFSB Recommendation, DOE established a Senior Steering Committee and a Senior Working Group to develop an overall strategy. In February 1995, Office of Defense Programs (DP) issued the *Department of Energy Implementation Plan for Defense Nuclear Facilities Safety Board Recommendation 94-4, Deficiencies in Criticality Safety at the Oak Ridge Y-12 Plant*. This Implementation Plan (IP) describes schedules for the phased resumption of activities at the Y-12 Plant. The following tasks were identified as part of the IP:

- Task 1 – Organization
- Task 2 – CSAs/OSRs
- Task 3 – Criticality Safety
- Task 4 – Conduct of Operations
- Task 5 – Technical Competence
- Task 6 – Corrective Actions
- Task 7 – Reporting Requirements
- Task 8 – Change Control

## 2.0 Introduction

The DOE established two independent teams to evaluate the full Conduct of Operations Program at the Oak Ridge Y-12 Plant. The evaluations assessed the DOE Headquarters (HQ), Oak Ridge Operations Office (ORO), Y-12 Operations Office (YSO), and the Management and Operations (M&O) contractor. The two Teams consisted of DOE technical managers, M&O contractors, and consultants with Conduct of Operations expertise.

Task 4 of the IP is the Y-12 Conduct of Operations Assessment. The Federal Assessment was an evaluation of Conduct of Operations direction, support, and oversight provided by the DOE at YSO, at ORO, and at HQ. The LMES Assessment, which was conducted simultaneously at Y-12, focused on the LMES Conduct of Operations Program at Y-12.

These representative Conduct of Operations Assessments compared the full Y-12 Conduct of Operations Program against DOE Order 5480.19, *Conduct of Operations Requirements for DOE Facilities*, by utilizing the method established during the Pantex Plant Conduct of Operations Enhancement Program. The Assessments also incorporated the broader DNFSB Recommendation 92-5 concepts.

The Team members used this methodology to evaluate:

- The Conduct of Operations actions completed to date at the Y-12 Plant
- The long-term posture of LMES Conduct of Operations Program
- The Y-12 implementation of the requirements of DOE Order 5480.19
- The contents of previous Y-12 Conduct of Operations assessments
- The effectiveness of corrective actions taken as a result of previous assessments.

The Team members applied their experience gained from similar reviews at the Pantex Plant, Rocky Flats Site, and the Savannah River Site to provide observations, suggestions, and recommendations to optimize the Y-12 Conduct of Operations Assessment process.

The results from each assessment are documented in separate reports. After concurrence, these Reports will be provided to the DOE 94-4 Senior Steering Committee. Once that Committee concurs with the Reports, the Reports will be submitted to the DNFSB to satisfy a Recommendation 94-4 IP commitment. Return visits to the site may be required, in order to help the site determine the effectiveness of the corrective actions associated with these assessments.

A glossary of definitions specific to the Conduct of Operations Assessment is included in this Report. Conduct of Operations Assessment acronyms are also listed.

### **3.0 Purpose**

**The primary purpose of the IP Task 4 Conduct of Operations Assessments was to establish the implementation level of Conduct of Operations activities at LMES and at Y-12. With the help of these two assessments, Y-12 will better identify deficiencies and establish a combined corrective action plan of tasks that will enhance the Y-12 Conduct of Operations Program. The recommendations identified in the assessment reports were intended to be useful, manageable, and support institutional improvements. The recommendations should also promote a positive standards-based, compliance culture that corrects the root causes of previously identified deficiencies.**

**A secondary purpose of the Assessments, is to evaluate whether the Oak Ridge facility is sustaining resumption oriented commitments and whether the facility's longer term plans are consistent with the other Recommendation 94-4 and related LMES commitments already specified in the IP.**

## 4.0 Objectives and Scope

The objectives of the Y-12 Conduct of Operations Assessments were to evaluate:

- The Conduct of Operations Program
- The Conduct of Operations Implementation
- The Conduct of Operations Corrective Actions

Each Conduct of Operations Assessment Team achieved these objectives through observations of facility activities, interactions with site personnel, review of procedures, review of corrective actions, tours of facilities, and inspections of systems/equipment.

Conduct of Operations covers some aspect of the scope of all the 94-4 IP Tasks. The IP Task 4 Conduct of Operations Assessments evaluated how the programs/processes of the other 94-4 IP Tasks are conducted at Y-12. IP Task 4 did not evaluate how the other 94-4 IP Tasks were conducted.

The representative Conduct of Operations Assessments were primarily directed at Y-12's Receipt, Storage, and Shipment (RSS) and Depleted Uranium Operations (DUO) organizations. Appendix C, *Y-12 Conduct of Operations Assessment Facilities List*, provides a listing of the facilities included as part of the Conduct of Operations Assessments. The Team leaders decided which facilities were assessed.

The scope of the LMES Conduct of Operations Assessments included, but was not limited to, the following topics:

- LMES management of Conduct of Operations programs
- Applicable portions of completed Readiness Assessments
- Completed actions in Near-Term Initiatives for Conduct of Operations activities
- Corrective actions related to probable causes documented in the Type C Investigation
- Corrective actions related to causal factors in the LMES internal report, *Evaluation of Criticality Safety Discrepancy Data*
- Progress by LMES in Phase III and IV activities involving criticality safety as defined in Y/AD-623, *Plan for Continuing and Resuming Operations*
- Any Special Operations that were in progress:
  - One-time operations
  - Those operations that will become part of standard operations

## **5.0 Assessment Results**

### **C-COO-1: Conduct of Operations Program**

#### **Performance Objective C-COO-1/Sitewide**

##### **Criteria:**

The Conduct of Operations Program at the Y-12 Plant meets today's quality level expected within the DOE-complex. The Program should promote adequate Conduct of Operations performance when implemented.

##### **Summary:**

The purpose of this performance objective was to assess if the Conduct of Operations requirements have been adequately planned for implementation and will be of a level of quality required by today's performance standards.

Management has been adequately involved in the development of the overall program. Line management has not yet commenced the self assessments that are currently routine in mature programs at other sites. The first-line supervisors and line managers are directly involved in the oversight of operations activities in the facilities evaluated in RSS and DUO. During interviews, plan-of-the-day meetings, crew briefings, involvement in procedure validations, and observation of personal involvement by first-line managers, there has been an adequate overall demonstration of ownership and management in the operational facilities evaluated.

The organization structure has undergone several changes since resumption has started. New managers who understand disciplined operations and Conduct of Operations are being placed in positions of responsibility which will impact improved performance. Because implementation planning for plant-wide Conduct of Operations is now ongoing, the lessons learned from the resumed facilities, and the continuing use of mentors to assist with implementation should carry over plant-wide. A Conduct of Operations coordinator for the plant was recently appointed, and that individual has been in discussions with team members for advice about structuring the Y-12 program.

The Mentor Program was reviewed in order to offer recommendations for improving the effectiveness of the program. The mentors were observed first-hand in the evaluated facilities. Their personal involvement in helping the facilities with implementation and conducting oversight and assessments has been instrumental in making the facilities ready for resumption. The Mentor Program has expanded so that mentors are now in numerous areas of the plant. It is appropriate that the Mentor Program effectiveness be self assessed by the plant as part of the Corrective



**Action Plan which will follow this Assessment. It is recommended that several additional management mentors be utilized since making progress plant-wide is a significant undertaking based on experience at other sites. Consideration should be given to increasing mentoring in areas such as EUO where progress has been significantly behind the resumed areas. It is also recommended that mentors have frequent meetings in which they share experience, lessons learned, and receive guidance about work priority.**

**During future periods of resumption, performance indicators should be developed and used to show real progress. Mentors could develop this based on experience at other sites. Items which should be tracked routinely are maintenance backlog, CSA infractions status, performance against goals and objectives, and personnel-related and total occurrences.**

**The training and drill programs were assessed to determine their adequacy based on other site experience. As noted in the training and drill program Forms 1, the plant programs are still immature and behind other sites. During resumption, significant regular floor level training was conducted in RSS and DUO facilities. It was noted that regular floor level training is not being conducted as a matter of routine. It is recommended that a robust continuing-training-program be initiated at the floor level in resumed facilities. The program should be expanded plant-wide near-term, since a robust program has proven to be the most effective mechanism at the other sites for promoting culture change, teaching requirements, and achieving the disciplined approach to Conduct of Operations. This type of continuing training can be efficiently accommodated by taking advantage of crew briefings, which are part of the routine. Experience has shown that assembling all operations and support personnel together very regularly in facilities for ongoing training is very effective.**

**The Conduct of Operations Implementation Plan for the plant is still being developed. Based on the result of applying the graded approach and defining roles and responsibilities in RSS and DUO facilities, the foundation has been put in place for developing this program for the plant. Significantly experienced personnel are available at other sites to offer advice and assistance.**

**There was evidence of progress in Phases III and IV involving criticality safety as defined in Y/AD-623, Plan for Continuing and Resuming Operations. The process for CSA development has improved somewhat and the understanding of the requirements has improved in some areas. However, serious shortfalls were noted with effective implementation of corrective actions to-date, and this is discussed in Form 2, C-C003-1. Effective-implementation of corrective action is an area that needs significant improvement.**

**The supporting infrastructure programs were assessed to see if they will adequately support a satisfactory Conduct of Operations program. Deficiencies were noted in implementation and effectiveness in many areas. In general, the support program areas evaluated were below today's standards. The support groups performance is detailed in Support Forms 1. During the course of the assessment, an evaluation of the adequacy of planned resources for satisfactorily implementing Conduct of Operations concluded that this was satisfactory.**

The Lockout-Tagout program was satisfactory overall. The training and drill programs are immature and need strengthening. The procedure program needs considerable improvement as indicated in the Forms 1 and 2 in the Procedure Program.

Experienced personnel have been added to the staff in many important positions fundamental to implementation. Many are new. Mentors are in place to help with much of the administrative burden required, and to help train personnel.

New management should avail themselves first-hand of how programs have been put in place at other DOE sites. Trips to other sites should be conducted to facilitate development of good program elements more efficiently. Similarly, other site personnel should be asked to conduct technical assistance visits to help Y-12 personnel develop their programs. This has worked well at other sites. First-line managers and supervisors should participate in this process as well as senior managers.

From an overall perspective, a resumption program within DOE facilities is a significant undertaking based on experience at other facilities. Others have found that having a dedicated senior individual leading and directing the programmatic improvements and the culture change is effective. It is recommended that this be considered as part of the self assessments and planning which will take place to formulate the Corrective Action Plan resulting from this assessment.

The Special Operations observation results are included in facility-specific Forms 1 and 2. The observation of the transfer of material from the warehouse to the QE areas indicated that Conduct of Operations practices in this area are adequate.

It is recommended that Plant Management access the collective significance of the findings, concerns, and observations in this report, to include their generic implications, in order to understand the breadth and depth of the actions which should be included in the Corrective Action Plan. Other sites have found that thoroughly evaluating the deficient conditions, and charting a path forward consistent with budget and resource realities results in a credible, and achievable program over a realistic time-frame.

**Issues:**

1. The Plant Conduct of Operations Matrices of Applicability and Implementation Plan has not yet been developed as required in DOE Order 5480.19. C-COO-1-1.
2. Line management is not conducting routine Conduct of Operations assessments as required by the Y-12 Plant Management Assessment Program (Y60-028) requirements and DOE Order 5480.19. C-COO-1-2.
3. DOE monthly assessments are not acted upon by management. C-COO-1-3.
4. Occurrence reporting does not meet DOE Order 5000.3B requirements. C-COO-1-4.
5. The Nuclear Operations Conduct of Operations Manual chapter on rounds does not incorporate the requirements to inspect for correct placement of tags and locks.

- C-COO1-5.
6. General lighting in many facilities is inadequate. C-COO-1-6.
  7. Plant Conduct of Operations Manual has not yet been developed. C-COO-1-7.
  8. Performance goals as required by DOE Order 5480.19 and the Nuclear Operations Conduct of Operations Manual are not currently being maintained as required by the Order and Manual. C-COO-1-8.
  9. Communications practices are not in conformance with DOE Order 5480.19, Chapter IV. C-COO-1-9.
  10. Routine activities impacting Conduct of Operations are not standardized. C-COO-1-10.

### **Performance Objective C-COO-1/Facilities**

#### **Criteria:**

The Conduct of Operations Program at the Y-12 Plant meets today's quality level expected within the DOE-complex. The Program should promote adequate Conduct of Operations performance when implemented.

#### **Summary:**

For the facilities, the Conduct of Operations Program has been effectively established through the Nuclear Operations Conduct of Operations Manual. Most elements of the manual have been identified as applicable to RSS, DUO, and Quality Evaluation activities. Reorganization and infrastructure changes have been accomplished to support the program as described in the Conduct of Operations Manual. Sufficient staff has been established to perform the operations planned for the facilities. The use of mentors in support of the operations personnel has been effective in establishing the programmatic elements of Conduct of Operations. Material conditions do exist in the buildings which affect safety and should be corrected. In addition, field observation indicated some requirements established for the buildings are being ignored by support organizations.

#### **Issues:**

1. Specific responsibilities and actions required to implement the Conduct of Operations Manual chapter requirements in facilities have not been fully developed. C-COO-1/9204-4-1.
2. LMES should review Conduct of Operations Chapters 3 and 13 for applicability to all facilities. C-COO-1/DUO-1.
3. There are no maintenance procedures in place or scheduled to be developed to support operations or equipment in 9215/9204-2E. C-COO-1/DUO-2.
4. An applicability matrix for 9215 EUTO is not filed in the shift manager's or operations manager's Conduct of Operations Manual. C-COO-1/EUTO-1.

## **Performance Objective C-COO-1/Lockout-Tagout**

### **Criteria:**

The Conduct of Operations Program at the Y-12 Plant meets today's quality level expected within the DOE-complex. The Program should promote adequate Conduct of Operations performance when implemented.

### **Summary:**

The Y-12 Lockout/Tagout Program as planned and currently being implemented is sufficiently comprehensive. The Y-12 Lockout/Tagout Program has adequate resources and management involvement but, does not meet today's DOE-wide practice in that neither the present procedure (Y70-527) nor the procedure to be implemented in December 1995 (IS-107); (1) Specifies independent verification of the adequacy of the lockout/tagout coverage, (2) Requires independent verification that locks and tags are hung on the correct component, or (3) Requires independent verification that components being locked and/or tagged out are in the position specified on the lockout/tagout permit. Although these elements are not specifically required in DOE Order 5480.19, Chapter 9, these actions are expected for lockouts/tagouts that do not meet the requirements for single point lockout. These actions are required in DOE-STD-1030-92, section 4.4.1 and DOE-STD-1036-93, section 4.2.1, which provide direction for Lockouts and Tagouts and Independent Verification.

### **Issues:**

1. The Y-12 Lockout/Tagout Program does not meet today's DOE-wide practice in that appropriate verification is not required. C-COO-1/Lockout-Tagout-1.
2. The Lockout/Tagout program does not specify frequency of periodic inspections. C-COO-1/Lockout-Tagout-2.

## **Performance Objective C-COO-1/Training and Drills**

### **Criteria:**

The Program at the Y-12 Plant meets today's quality level expected within the DOE-complex. The Program should promote adequate Conduct of Operations performance when implemented.

### **Summary:**

The training organization at Y-12 is fragmented in that each Division (EUO, DUO, etc.) has its own training manager. The division training manager is responsible for identifying training requirements and scheduling personnel for training at the Center for Continuing Training operated

off site by the Energy Systems Group. There is no overall training manager for the site. A new position has been established to coordinate the efforts of the Nuclear Operations organization. This new position has the title of Nuclear Operations Qualification and Procedures Manager and has been assigned the mission of establishing standards for training, qualification and procedures within the Nuclear Operations organization. The new manager has been in this position only a few months.

Observations in the field at Y-12 demonstrate that the standardization of training and qualifications materials is needed. There is no standard qualification process. Qualification cards have been developed but are not standardized. There is no master plan for Conduct of Operations coordinating the LMES efforts within the training organization. The roles and responsibilities of the Division training managers and the Nuclear Operations Qualification and Procedures Manager have not been defined.

The procedure defining the Plant Training Requirements (Y10-27) contains the necessary direction for an adequate program. A Y-12 Training Manager, with overall responsibility for the program, is needed to execute an adequate training program.

Three drills were also observed as part of the training activities at Y-12. The Drill Program was immature. An effective evaluation of the participants was prevented, due to excessive pre-alertment. Limited training value will be achieved using this program of drills. Many recommended improvements to the Drill Program were offered by the Team during the pre-drill brief, post-drill critiques, and final outbriefing.

**Issues:**

1. Shift manager and shift technical advisor qualification process is not documented. C-COO-1/Training and Drills-1.
2. The site lacks infrastructure to support an effective training program. C-COO-1/Training and Drills-2.
3. The Training Program does not take credit for actual events. C-COO-1/Training and Drills-3.

**Performance Objective C-COO-1/Procedures**

**Criteria:**

The Conduct of Operations Procedures Program at the Y-12 Plant meets today's quality level expected within the DOE-complex. The Procedures Program should promote adequate Conduct of Operations performance when implemented.

**Summary:**

Interviews with plant personnel indicate that Y10-102, Technical Procedure Program Control, is difficult to follow. However, as written, adequate programs have been established to control the review, validation, and approval process.

**Issues:**

None

**Performance Objective C-COO-1/Support**

**Criteria:**

The Conduct of Operations Program at the Y-12 Plant meets today's quality level expected within the DOE-complex. The Program should promote adequate Conduct of Operations performance when implemented.

**Summary:**

The Conduct of Operations Program has been developed for the Nuclear Operations group. There is no site-wide program for Conduct of Operations. There is no site-wide Conduct of Operations Manual. This situation results in some non-nuclear operations personnel entering nuclear facilities to conduct maintenance, surveillances, and inspections who are weak in Conduct of Operations practices. The assessment team observed several deficiencies in Conduct of Operations practices associated with support group activities.

**Issues:**

1. Conduct of Operations performance for support group personnel not assigned to Nuclear Operations is deficient. C-COO-1/Support-1.

## **C-COO-2: Conduct of Operations Implementation**

### **Performance Objective C-COO-2/Sitewide**

#### **Criteria:**

The quality level of implemented elements of DOE Order 5480.19 in facilities meets today's DOE-wide performance standards based on the Assessment Team's experience with Rocky Flats, Pantex, and Savannah River Conduct of Operations Program performance.

#### **Summary:**

The purpose of this performance objective was to evaluate the quality level of implementation of DOE Order 5480.19 relative to what is considered adequate based on today's DOE-wide performance standard. Implementing directives utilized for implementing the program elements were evaluated in the facilities assessed. These were determined to be adequate overall. The process of using appendices to the Nuclear Operations Conduct of Operations Manual and Standing Orders have been effective for specifying detailed requirements in the buildings. Expansion of this to the remainder of the Plant in due course should be effective. The Implementation plans for the evaluated facilities were adequate, and the implementation progress status is closely tracked by Mentors in RSS facilities. This practice should start in DUO facilities, and in others as their Conduct of Operations Matrices of Applicability and Implementation Plans are developed. The graded approach has been adequately implemented in RSS and DUO facilities. With continued mentoring and consistent management oversight, the assessed facilities should achieve a quality program meeting today's standards in the complex.

For the resumed facilities, the implementation quality and status of each required Chapter of DOE Order 5480.19 was evaluated relative to benchmarked programs (Rocky Flats, Pantex, Savannah River Site). A methodology using weighted values for various sections as they affect disciplined operations, and a methodology for assigning implementation status percentage achievement were used to arrive at a computed implementation status percentage. This method is used at other sites in order to achieve a more objective measure of the maturity of the program, since it is performance based. Y-12 Plant has a similar methodology in use which is consistent with the one used by the team. The team evaluations, and the assessments previously conducted by mentors and managers had close correlation. This indicates that status relative to today's standards is well understood at Y-12 nuclear facilities. Ownership and understanding of Conduct of Operations were closely evaluated. Specific comments are in the individual facility report. Overall, the level observed in the assessed facilities was very adequate, and the first line management were taking their responsibilities seriously. There is no question about the facilities having made significant positive change since the resumption program started.

#### **Issues:**

None

## **Performance Objective C-COO-2/Facilities**

### **Criteria:**

The quality level of implemented elements of DOE Order 5480.19 in facilities meets today's DOE-wide performance standards based on the Assessment Team's experience with Rocky Flats, Pantex, and Savannah River Conduct of Operations Program performance.

### **Summary:**

The Conduct of Operations Implementation Status assessment utilized the experience gained observing operations at Rocky Flats, Savannah River, and Pantex for implementing Conduct of Operations. During the review, the assessment team recommendations were provided to the managers and workers to assist them in making improvements in their program. Implementation of Conduct of Operations for RSS, DUO, and QE is proceeding satisfactorily. The mentors evaluation of implementation status completed in October 1995 compares closely with the evaluation conducted by the team.

The evaluation of Conduct of Operations touched on all elements of DOE Order 5480.19. Most elements are identified as applicable to the Y-12 Facilities. Two areas identified as not applicable to the facilities are the controlled area guidelines and the unique processes. The team did not evaluate performance in these areas, but recommends that the site review Plant operations for the applicability of these chapters during their next self evaluation. Many sites in the DOE complex have applied these guidelines to unique activities and non-nuclear chemistry operations.

The practices of using full-time mentors, requiring hands-on involvement by the Shift Manager, Operations Manager, and Production Manager in day-to-day activities, and conducting significant training during the last year have been successful in achieving an adequate level of disciplined attitude and performance of work in the nuclear facilities. Continuing training should be continued to promote continuing improvement.

During interviews and observations on the floor, both workers and managers demonstrated good ownership and understanding of formal Conduct of Operations. The root causes of the September 1994 CSA Incident were understood by the workforce and work is being performed according to formal Conduct of Operations principles.

### **Noteworthy Practices:**

1. The pre-evolution brief for the material move on 11/1/95 was very good.  
C-COO-2/9204-4 QE-6.



2. A work assignment sheet is used to acknowledge expectations about performance. C-COO-2/9204-4 QE-7.
3. The response to CSA violation demonstrated an understanding of CSA requirements and prompt corrective action in one facility. C-COO-2/9204-2E-1.
4. Pre-Shift briefings in 9215 EUTO were well conducted. C-COO-2/EUTO-8.
5. There has been an effective Mentor Program in 9215 EUTO. C-COO-2/EUTO-9.

**Issues:**

1. A support group pre-evolution brief was less than adequate. C-COO-2/9204-4 QE-1.
2. Material conditions exist that affect safety. C-COO-2/9204-4 QE-2.
3. A communications method is needed in operations areas not covered by the announcing system. C-COO-21/9204-4 QE-3.
4. Radiological control area entry point deficiencies. C-COO-2/9204-4 QE-5.
5. Plan of the day meetings are not consistent across the plant. C-COO-2/9402-2E-2.
6. Bi-monthly inventories have not been completed for 9204-2E since July 1995. C-COO-2/9204-2E-3.
7. The Public Address system is not used effectively. C-COO-2/EUTO-1.
8. Voice communications are informal and not precise. Repeatbacks are neither used nor required. C-COO-2/EUTO-2.
9. Four potential CSA violations were found in 9201-5, third floor laydown area. C-COO-2/DUO-1.
10. A number of Radiological Control deficiencies were noted. C-COO-2/DUO-2.
11. Some electrical controller doors are not routinely fastened after maintenance. C-COO-2/DUO-3
12. Material conditions in the equipment spaces of 9998 and on the roof of 9998 were poor. C-COO-2/DUO-4.
13. Daily round sheets were not reviewed weekly as required. C-COO-2/DUO-5.
14. Housekeeping in 9201-5 had deteriorated to the point that personnel making rounds were insensitive to safety concerns. C-COO-2/DUO-6.
15. The Lockout-Tagout system in building 9720-5 is not periodically inspected as required by DOE Order 5480.19, Chapter IX. C-COO-2/9720-5-1.
16. Operator rounds do not inspect for correct placement of tags and locks as specified in DOE-STD-1030-92, Guide to Good Practices for Lockouts and Tagouts. C-COO-2/9720-5-1.
17. Conduct of Operations implementation status in the warehouse is adequate. C-COO-2/9720-5-2.
18. Many material deficiencies exist in DUO facilities. C-COO-2/DUO-7.
19. Pre-shift briefings need improvement. C-COO-2/EUTO-3.
20. EUO Timely Order effectiveness needs improvement. C-COO-2/EUTO-4.
21. Workers need to record unusual items in the remarks section of the roundsheets. C-COO-2/EUTO-5.
22. Procedures development and labeling were reviewed and found to be well coordinated and

- effective. C-COO-2/DUO-8.
23. Review of the Casting Furnace startup evolution was presented in a formal and professional manner. C-COO-2/DUO-9.
  24. Ladder not available to verify leakage from EUO line. C-COO-2/DUO-10.
  25. The self assessment program in 9204-2E lacks management participation and is not performance based. C-COO-2/9204-2E-5.

### **Performance Objective C-COO-2/Lockout-Tagout**

#### **Criteria:**

The quality level of implemented elements of DOE Order 5480.19 in facilities meets today's DOE-wide performance standards based on the Assessment Team's experience with Rocky Flats, Pantex, and Savannah River Conduct of Operations Program performance.

#### **Summary:**

Lockout/Tagout logs reviewed are being maintained in accordance with procedure Y70-527 with the exception that record of an audit could not be located in one facility. Procedures are followed when hanging locks and tags. Lack of component labeling greatly increases the difficulty of establishing a safe work boundary and hanging of locks and tags on the correct component.

#### **Issues:**

1. Locking devices used in one lockout/tagout were improperly installed. C-COO-2/Lockout-Tagout-1.
2. Some deficiencies were noted during placement of lockout/tagout. C-COO-2/Lockout-Tagout-2.
3. Record of lockout/Tagout audits for 9720-5 could not be located. C-COO-2/Lockout-Tagout-3.
4. Review of Lockout/Tagout Log in 9998. No deficiencies were noted. C-COO-2/Lockout-Tagout-4.

### **Performance Objective C-COO-2/Training and Drills**

#### **Criteria:**

The quality level of implemented elements of DOE Order 5480.19 in facilities meets today's DOE-wide performance standards based on the Assessment Team's experience with Rocky Flats, Pantex, and Savannah River Conduct of Operations Program performance.

**Summary:**

The training being implemented at Y-12 reflects the fragmented program infrastructure. The team observed various training activities. The results varied widely due to a lack of standardization. Many of the expected elements of a mature training program are not in place. There is no qualification card or standard for Shift Managers or Shift Technical Advisors as required by the Conduct of Operations Manual. There is no evidence of routine continuing training being conducted in accordance with the plant training procedure Y10-27.

Three drills were observed during the assessment. The method used to initiate and control the drills caused excessive pre-alertment of the drills and prevented a true evaluation of the response of operations personnel to the drill. Excessive prompting and coaching of participants were observed during the drills.

The overall training implementation is behind that of other DOE Sites.

**Issues:**

1. Continuing training is not being conducted in accordance with Chapter 12 of the Nuclear Operations Conduct of Operations Manual. C-COO-2/Training and Drills-1, 8.
2. Personnel serving as shift manager and shift technical advisor are not formally qualified. C-COO-2/Training and Drills-2.
3. Training is not formally conducted. C-COO-2/Training and Drills-3.
4. Training is not effective in helping operators retain important information C-COO-2/Training and Drills-4.
5. Drills need improvement. C-COO-2/Training and Drills-5,6,7.

**Performance Objective C-COO-2/Procedures**

**Criteria:**

The quality level of implemented elements of DOE Order 5480.19 in facilities meets today's DOE-wide performance standards based on the Assessment Team's experience with Rocky Flats, Pantex, and Savannah River Conduct of Operations Program performance.

**Summary:**

During the field review of a proposed change to CSA B2E-12, no record of the changes was available which described the revisions to the CSA and the basis/justification for those revisions. One 9204-2E employee had reviewed the proposed revision against the existing approved CSA and attempted to identify the differences. Neither the 9204-2E employee nor NCSD personnel who were present, could determine if all required changes had been incorporated in the proposed

revision. Neither the 9204-2E nor NCSD personnel could provide the basis/justification for the revisions which had been incorporated. A more detailed review of the CSA by the assessment team member, identified revisions not recognized by the 9204-2E employee or NCSD personnel during the review. Neither the 9204-2E employee nor NCSD personnel who were present, could determine if these additional revisions were required.

One revision to CSA B2E-12 was to add a new type of container (portable table). Prior to final approval of the CSA, NCSD personnel performed a field validation to ensure facility compliance. Field validation by the NCSD engineer consisted of identification of a container which was labeled as a portable table. No effort was made to ensure the identified container was that actually referenced by the CSA. A drawing of the portable table was available but was not used by the NCSD engineer or referenced in the CSA.

**Issues:**

1. The revision process for CSAs does not contain sufficient documentation and review of changes. C-COO-2/Procedure Program-1.
2. The CSA validation process is not sufficiently rigorous to ensure facility compliance with assumptions. C-COO-2/Procedure Program-2.

## **Performance Objective C-COO-2/Support**

**Criteria:**

The quality level of implemented elements of DOE Order 5480.19 in facilities meets today's DOE-wide performance standards based on the Assessment Team's experience with Rocky Flats, Pantex, and Savannah River Conduct of Operations Program performance.

**Summary:**

During the assessment, it became obvious that there were different levels of Conduct of Operations being demonstrated within the Nuclear Operations facilities. Key operational safety requirement surveillances are being performed by personnel from organizations outside Nuclear Operations. These groups include Plant Support Services to perform the Criticality Alarm and Announcing System tests, the Fire Department Inspections and Testing group to perform fire detection and suppression surveillances, and the Radiological Control and Maintenance group to perform radiological monitoring. There were several Conduct of Operations performance deficiencies noted by support group personnel. The level of knowledge of Conduct of Operations requirements was much lower for most support group personnel observed. Some support group managers lacked a good understanding of Conduct of Operations principles. The support groups must achieve the same implementation level of the Conduct of Operations elements in order to have a successful program.

The notable difference in performance causes the overall assessment to be lower for Conduct of Operations implementation in nuclear facilities. Substantial progress must be made for a satisfactory level of Conduct of Operations implementation to be achieved.

**Noteworthy Practice:**

1. Conduct of Operations implementation approach by Steam Plant management is commendable. C-COO-2/Support-7.

**Issues:**

1. Fire Department records of fire extinguisher inspections are less than adequate. C-COO-2/Support-1.
2. Many deficiencies were observed in radiological control practices. C-COO-2/Support-2.
3. CAAS surveillance source poses an ALARA concern. C-COO-2/Support-3.
4. Contaminated transport trucks pose an ALARA concern. C-COO-2/Support-4.
5. Radiological control practices were inconsistent. C-COO-2/Support-5.
6. Radiological control support is inadequate. C-COO-2/Support-6.
7. Surveillance of dry chemical fire extinguishers may not ensure operability. C-COO-2/Support-8.

# TWRS CORES PER YEAR

CASE	SAMPLE ANALYSIS GROUP		FY 94	FY 95	F	
MINIMUM	SCREENING	PRIMARY (ORIGINAL CORES)	24	116		
		SECONDARY (ORIGINAL CORES)	20	86		
	SAFETY RESOLUTION	ORIGINAL CORES	20	86		
		NEW CORES	0	0		
	WASTE TREATMENT/ DISPOSAL	ORIGINAL CORES	0	12		
		NEW CORES	0	0		
	TOTALS	ORIGINAL CORES	24	116		
		NEW CORES	0	0		
			<b>TOTAL CORES</b>	<b>24</b>	<b>116</b>	

\* BASED ON FISCAL YEAR CORE ANALYSIS INITIATED, NOT NECESSARILY FISCAL YEAR ANALYSIS CO

### **Performance Objective C-COO-3/Facilities**

#### **Criteria:**

The corrective actions taken to-date have been adequate and have been effective in implementing positive change in the work force in Conduct of Operations.

#### **Summary:**

The extensive management and mentor attention for improving the Conduct of Operations in DUO has been effective in establishing appropriate and effective corrective actions for the identified Nuclear Operations deficiencies. This attention needs to be focused on support organizations, since the assessment team observed several support group activities within the Nuclear Operations facilities that were less than adequate. The focus of management on the nuclear activities has had the desired result, but overall Conduct of Operations compliance is affected by all personnel in the facility.

#### **Issues:**

1. Corrective action items from Y/NO-00002 and -00003 were not all clearly defined and effectively progressing toward closure in DUO facilities. C-COO-3/DUO-1.
2. DUO corrective action review. Status was adequate. C-COO-3/DUO-1.

### **Performance Objective C-COO-3/Training and Drills**

#### **Criteria:**

The corrective actions taken to-date have been adequate and have been effective in implementing positive change in the work force in Conduct of Operations.

#### **Summary:**

The effectiveness and appropriateness of the corrective actions to address training deficiencies could not be evaluated. The Nuclear Operations Qualification and Procedures Manager is newly assigned to his position and has not yet developed a documented corrective action plan to address known deficiencies.

#### **Issues:**

1. No corrective action plans have been presented to address training deficiencies. C-COO-3/Training and Drills-1.

## **Performance Objective C-COO-3/Procedures**

### **Criteria:**

The corrective actions taken to-date have been adequate and have been effective in implementing positive change in the work force in Conduct of Operations.

### **Summary:**

The technical procedure process was reviewed against DOE identified deficiencies from the Readiness Assessment for Receipt, Storage, and Shipment of Special Nuclear Material at the Oak Ridge Y-12 Plant. Progress has been made toward implementation of identified corrective actions. Deficiencies still exist in that no centralization of the procedure support and document control organizations has occurred and personnel do not have a working knowledge of requirements. A central point of contact should be considered to ensure consistent application of requirements between divisions. The current process was implemented with minimal training. As a result, there is not clear understanding of the individual responsibilities at all levels of the revision process (i.e., parallel review, verification, validation, and approval).

### **Issues:**

1. Implementation of the procedures program does not completely address identified deficiencies. C-COO-3/Procedure Program-1.



## Appendix A

### Roles and Responsibilities

#### Team Leaders

The Team leaders were responsible for developing the Conduct of Operations Assessment Plan, for managing the Assessments, for briefing on-site personnel, and for writing the Assessment Reports. Prior to the onsite assessment, the Team leaders coordinated with HQ, ORO, YSO, and LMES personnel on logistics, required training, security access requirements, identification of counterparts, selection of facilities to be assessed, and an assessment schedule. The Team leaders were also responsible for conducting the entrance and exit meetings with HQ, ORO, YSO, and LMES personnel.

The Team leaders conducted daily briefings with HQ, ORO, YSO, and LMES personnel to review observations, concerns and findings, and approve the near-term daily schedule of activities (e.g., interviews, walkdowns, observations, and technical discussions). Team leaders facilitated the determination of the validity of any potential finding identified by the Team. They also resolved any conflicts between Team members and HQ, ORO, YSO, or LMES personnel. The Team leaders ensured the collection, for use in the final Assessment Reports, of any photographs or other pertinent reference materials. They also ensured the coordination of all IP Task 4 activities with activities of 94-4 IP Tasks 2, 3, 5, 6, and 7.

#### Assessment Team Members

The Team members conducted a comprehensive review based on the criteria specified in the Conduct of Operations Assessment Plan's Appendix C, *94-4 IP Task 4 Performance Objectives, Review Criteria, Approach and Expectations for the Assessment of DOE Actions Regarding the Implementation of Conduct of Operations at Y-12*. The Team members conducted a comprehensive review based on the criteria specified in the Conduct of Operations Assessment Plan's Appendix D, *Task 4 Performance Objectives, Review Criteria, Approach and Expectations for the Assessment of LMES*.

The Team members reviewed prior Y-12 Conduct of Operations assessments, focusing on LMES and Y-12 findings, corrective actions, interim actions, and post-resumption activities. They documented their reviews on the Assessment Forms found in the Conduct of Operations Assessment Plan's Appendix E, *Assessment Forms*. The Teams gathered assessment data by independent verification, direct observations of facilities (walkdowns), interviews with appropriate DOE and LMES personnel, and reviews of documents and programs.

Team members provided daily summaries of their activities that were utilized during the daily site management briefings and Team meetings. The data from the daily summaries was used as bases for

the final Assessment Reports.

Additional Team member responsibilities included the following:

- Prepare and sign assessment forms,
- Prepare assigned report sections,
- Provide written descriptions of dissenting issues,
- Provide concurrence with the final report.

## **ORO, YSO, and LMES Personnel**

YSO and LMES provided on-site office spaces with dedicated personnel and work stations for use by the Teams. Conference rooms, copy machines, fax machines, and requested reference materials were provided in the area adjacent to the Teams' office spaces. Additionally, YSO and LMES personnel arranged for secure environments and equipment to support reviews of classified documents and activities.

ORO, YSO, and LMES personnel provided Team members with appropriate site specific training, escort services, and with any information the Assessment Teams requested for their comprehensive evaluations. ORO, YSO, and LMES personnel served as counterparts, responsible for providing necessary technical assistance for the Team members.

ORO, YSO, and LMES personnel reviewed the approved Assessment Forms and provided response acceptance in Section IV of the Assessment Form 2s (Appendix E of the Conduct of Operations Assessment Plan).

Following the Conduct of Operations Assessments, HQ, ORO, YSO, and LMES personnel, in conjunction with the Team members, will establish what corrective actions are needed to close any identified Assessment findings. In addition, ORO may be requested to provide the Team leaders with photographs of the site processes and other specified reference materials for use in the final report.

## **Assessment Team Process**

### **Organization and Training**

Prior to the onsite assessment activities, the Assessment Teams was trained so they had escorted

access to the Y-12 facility. Training included basic security training and site orientation. Team leaders verified that each Team member was technically competent and had no direct connection with Y-12 operations that could affect their independence.

## Protocol

The Assessments required an open exchange of information between Team members, HQ, ORO, YSO, and LMES. Evidence of successful communication between these individuals included the following:

- Entrance meeting with HQ, ORO, YSO, and LMES to discuss the objectives of the assessment and obtain HQ, ORO, YSO, and LMES perspectives on assessment activities.
- Team leaders briefings of HQ, ORO, YSO, and LMES site management on the scope, purpose, and objective of the assessments.
- Establishment of counterpart contacts who facilitated information flow and logistics for the Team.
- Candid discussions that involved all parties.
- Daily meetings between the Team leaders and appropriate DOE or facility management throughout the Assessments. These meetings were used to review observations, concerns, and findings, as well as to arrange and schedule activities (e.g., interviews, walkdowns, observations, and technical discussions).
- Exit meeting at the end of the Assessments with Team members, ORO, YSO, and LMES to discuss the issues identified, validate their correctness, and ensure the most up-to-date information available.

## Assessment Process

### Planning Activities

Some members of each Assessment Team conducted a preliminary site visit for training and to resolve any pre-assessment issues. During the preliminary visit, the Team representatives selected buildings to be assessed and established lists of interviews, references, and site counterparts. Since all Team access was to be escorted-access, basic security training was all that was received. Other training was available, but not provided, which included LMES General Employee Training, Radiation Worker II, Criticality Safety, Emergency Preparedness, and/or Hazard Communications. With personally delivered reference packages that were sent before the Assessments, the Team members became familiar with DNFSB Recommendations 92-5, 93-6, and 94-4 (Appendix G of the Assessment Plan);

the DOE IP; Y/DD 500, *The Y-12 Plant Nuclear Criticality Safety Program Description*; Y/AD-622, *Type C Investigation of the Y-12 Plant Criticality Safety Approval Infractions Event*, and other background information.

### **Performance Objectives, Review Criteria, Approach, and Expectations**

The Conduct of Operations Assessment Plan provided the necessary guidance for conducting the evaluations associated with the 94-4 IP Task 4. Appendices C and D of the Conduct of Operations Assessment Plan contain the performance objectives, review criteria, approach, and expectations for each assessment. The criteria provided the basis for the Teams to conduct their work within the defined scope of the assessments. The review criteria provided guidance for interviews with personnel, reviews of procedures and programs, walkdowns of systems, and observations of facility conditions.

### **Assessment Forms**

Appendix E of the Conduct of Operations Assessment Plan contained the assessment forms used by Team members for documenting their reviews. Assessment Form 1 was used for documenting the detailed review of each objective. Assessment Form 2 was used to identify findings, concerns, observations, or noteworthy practices. Team members discussed with the Team leaders and appropriate HQ, ORO, YSO, or LMES representatives any issue raised prior to classification as a finding, concern, observation, or noteworthy practice. Definitions of these and other terms can be found in this Report.

Team members submitted assessment forms to their Team leader for review and approval. The Team leader then submitted the Assessment Form 2 to appropriate ORO, YSO, or LMES personnel for their response. ORO, YSO, and LMES personnel reviewed the approved Assessment Forms, provided responses, recorded the date, and indicated their acceptance in Section IV of Assessment Form 2s.

### **Document Reviews, Facility Walkdowns, and Interviews**

A tour of Y-12 facilities was conducted, during the preliminary site visit to familiarize the attending Team members with the layout of Y-12 facilities. During the first day of the assessment period, Team members conducted more familiarization tours. As the Assessments progressed additional walkdowns were conducted to identify and characterize issues and concerns. DOE and/or LMES representatives knowledgeable of Y-12 facility conditions accompanied Team members during these walkdowns.

Interviews were used to gather information on specific topics. Interviews were scheduled throughout the Assessment. Document reviews, facility walkdowns, and observations continued throughout the Assessment.

## **Classified Information Security**

Although some of the information needed to complete these assessments may be classified, the Report contains as much information as possible in an unclassified form. Materials generated onsite (e.g., working notes, Assessment Forms, etc.) were reviewed for classification.

The site provided the necessary safeguards and security administrative support to the Assessment Team members. This included providing secure environments and equipment. Areas approved for classified work were identified during the preliminary site visit and the initial tours. The goal was achieved to provide classified work support, so that classified documents, notes, and discussions were declassified through revision and interpretation. The final report was also reviewed for classification.

The scope of the security related administrative support included the following items:

- Secure work areas and areas outside security zones
- Access to unclassified and secure equipment (personal computers, laser printers, copiers, etc.)
- Unclassified and classified document storage
- Access to an authorized classifier
- Site classified documents
- Personnel access and badging
- Telephones (including access to secure telephones if needed)
- Authorization for to/from Y-12 transport of personal notebook computers and diskettes

To allow complete access to technical security areas, all Assessment Team members had current Q clearances.

## Appendix B

### Team Composition

#### Assessment Team Members

Members of the Assessment Teams were selected on the basis of technical expertise and assessment experience. The use of Team members from a number of DOE sites promotes the exchange of good practices, lessons learned, and diverse perspectives. These individuals are familiar with assessment methodology and experienced in conducting interviews, observing in-progress activities, and performing walkdowns of facility systems and equipment operation. The Assessment Teams include DOE technical experts, senior M&O contractors, and highly qualified consultants.

**ASSESSMENT TEAM MEMBERS**

**DOE ASSESSMENT**

D. Chaney - DOE-HQ (Team Leader)  
C. Everatt - DOE-SRO  
D. States - DOE-HQ  
J. Gries - Consultant/SMS  
E. Stafford - Consultant/SWEC

**LMES ASSESSMENT**

D. Branch - Kaiser-Hill, RF (Team Leader)  
G. Francis - Kaiser-Hill, RF  
J. Angelo - Mason-Hanger, Pantex  
D. Butler - Mason-Hanger, Pantex  
W. Condon - Westinghouse, SRS

## **Contractor Y-12 Conduct of Operations Assessment Team Biographical Summaries**

### **Contractor Team Leader**

#### **DANIEL B. BRANCH JR.**

Mr. Branch works for Kaiser-Hill at the Rocky Flats Environmental Technology Site. He has been at Rocky Flats since 1990 and created the Independent Safety Review Program there. He has experience in quality assurance, conduct of operations, operational readiness reviews, and operations assessment. He has served as Deputy Assistant General Manager, Plutonium Production, Deputy Associate General Manager Facilities Management and Operations, and Deputy Assistant General Manager, Quality Assurance. He created and managed the Mentor Program at Rocky Flats Plant and led the restart programs for Buildings 559, 707, and 771. He has led Conduct of Operations and operational assessments at Pantex, the Mound facility and the Princeton Plasma Physics Laboratory. He has 30 years of experience in the U.S. Navy. Significant Navy positions included assignments as nuclear and conventional arms control policy advisor for the Supreme Allied Commander Atlantic, NATO HQ, Brussels, Belgium, and as a member of the High Level Task Force, NATO, which planned and started conventional arms control negotiations with the Warsaw Pact. He commanded a nuclear submarine and a major surface ship. He holds a B.S. from the U.S. Naval Academy and an M.S. from the George Washington University.

### **Contractor Team Members**

#### **JAMES W. ANGELO**

Mr. Angelo is the Division Manager, Manufacturing with Mason & Hanger, Silas Mason Co., Inc. at the Pantex Plant. He is responsible for all Dismantlement Weapon Programs, and for all Evaluation Programs associated with Stockpile Stewardship for the enduring national stockpile. He is also responsible for Program Management, Waste Stream Management, Engineering, Transportation and Storage, Weapon Movement, and Safety Envelope for all facilities associated with manufacturing processes. He led the implementation of Conduct of Operations at Pantex, including the creation of the conduct of operations manual and establishment of the site mentoring group. He was a principal contributor to site restart following a maintenance shutdown. He has over 20 years of experience with the U.S. Navy, including command of a nuclear powered fast attack submarine. He holds a B.S. in Mathematics from the U.S. Naval Academy and an M.B.A. from the Rensselaer Polytechnic Institute.

### **DAVID BUTLER**

Mr. Butler is the Department Manager for the Operations Support Mentor Department with Mason & Hanger, Silas Mason Co., Inc. at the Pantex Plant. He has been at Pantex since February 1994, and established the Mentor program to implement formal Conduct of Operations at Pantex facilities. He led the development of the Pantex Plant Conduct of Operations Manual. He has over 22 years Navy Nuclear propulsion and submarine experience with various power plants, commanding USS Jack (SSN 605). He is experienced in formal conduct of operations and conduct of maintenance. He has experience as a nuclear engineering inspector, safety inspector, quality assurance officer, training and qualification certification officer, casualty and abnormal event drill coordinator and evaluator, and as a Personal Reliability Program Certification Officer. He holds a B.S. in Applied Mathematics from the U.S. Naval Academy and a M.S. in Computer Systems Management from the Naval Postgraduate School.

### **WILLIAM A. CONDON**

Mr. Condon has thirteen years of nuclear power experience, consisting of Commercial Nuclear (eight years) and Government Nuclear (five years). Mr. Condon has held various positions of responsibility, including Core Design and Accident Analysis for Brown's Ferry Nuclear, Senior Reactor Engineer, and Shift Technical Advisor for Sequoyah Nuclear, Reactor Division Operations and Administrative Procedure Manager, K-Reactor Assistant Operations Manager, and Reactor Division Environmental Stabilization Manager. Mr. Condon is currently assigned as the Area Manager for the Receiving Basin for Off-Site Fuels (RBOF) and the Reactor Facilities. In this position, Mr. Condon is directly responsible for assuring safety, disciplined operations, cost effectiveness, and continuous review of operations for compliance with applicable laws, regulations, orders, technical specifications, and procedures. Mr. Condon was instrumental in the implementation of the DOE Radiological Controls Manual. He was also instrumental in the development and implementation of the Savannah River Site (SRS) Conduct of Operations Manual. Mr. Condon has a M.S. in Nuclear Engineering from the University of Tennessee, Knoxville.

### **GARY E. FRANCIS**

Mr. Francis works for Kaiser-Hill at the Rocky Flats Environmental Technology Site. His experience includes extensive senior management experience performance-based training, environmental and waste management compliance and assessment, transition management, and conduct of operations. He was the team leader for development of a DOE operational readiness review plan of action and implementation plan for Building 771, and a principle coordinator for the recovery of Building 771 from unauthorized tank draining. He is a senior mentor for conduct of operations and is a Compliance and Performance Assurance Program Manager at Rocky Flats. He was a member of the operations assessment team for Pantex Plant conducted in early 1994. He has 20 years of operational and technical management experience in the U.S. Navy, performing various duties on four nuclear submarines including Engineer and Commanding Officer. He holds a B.S. from the U.S. Naval Academy and an M.S. in Nuclear Engineering from The Catholic University of America.



## Appendix C

### Conduct of Operations Assessment Facilities List

#### Receipt, Storage, and Shipment Facilities

Y-12 Building Number	Affected Area
9720-5	Entire building
9204-2/2E	Defined areas
9204-4	Defined areas
9215	Defined areas
9998	Defined areas

#### Depleted Uranium Operations Facilities

Y-12 Building Number	Affected Area
9201-5	Defined areas
9201-5N	Defined areas
9204-4	Defined areas
9212	Defined areas
9215	Defined areas
9996	Defined areas
9998	Defined areas

#### Enriched Uranium Operations Facilities

Y-12 Building Number	Affected Area
9212	Rooms 26, 29, C-1, etc.

## Appendix D

### Glossary

**Concern** -- Any situation that is not in violation of any written procedure, but in the judgment of the Assessment Team member indicates less than optimal performance. A concern could be an indicator of more serious problems.

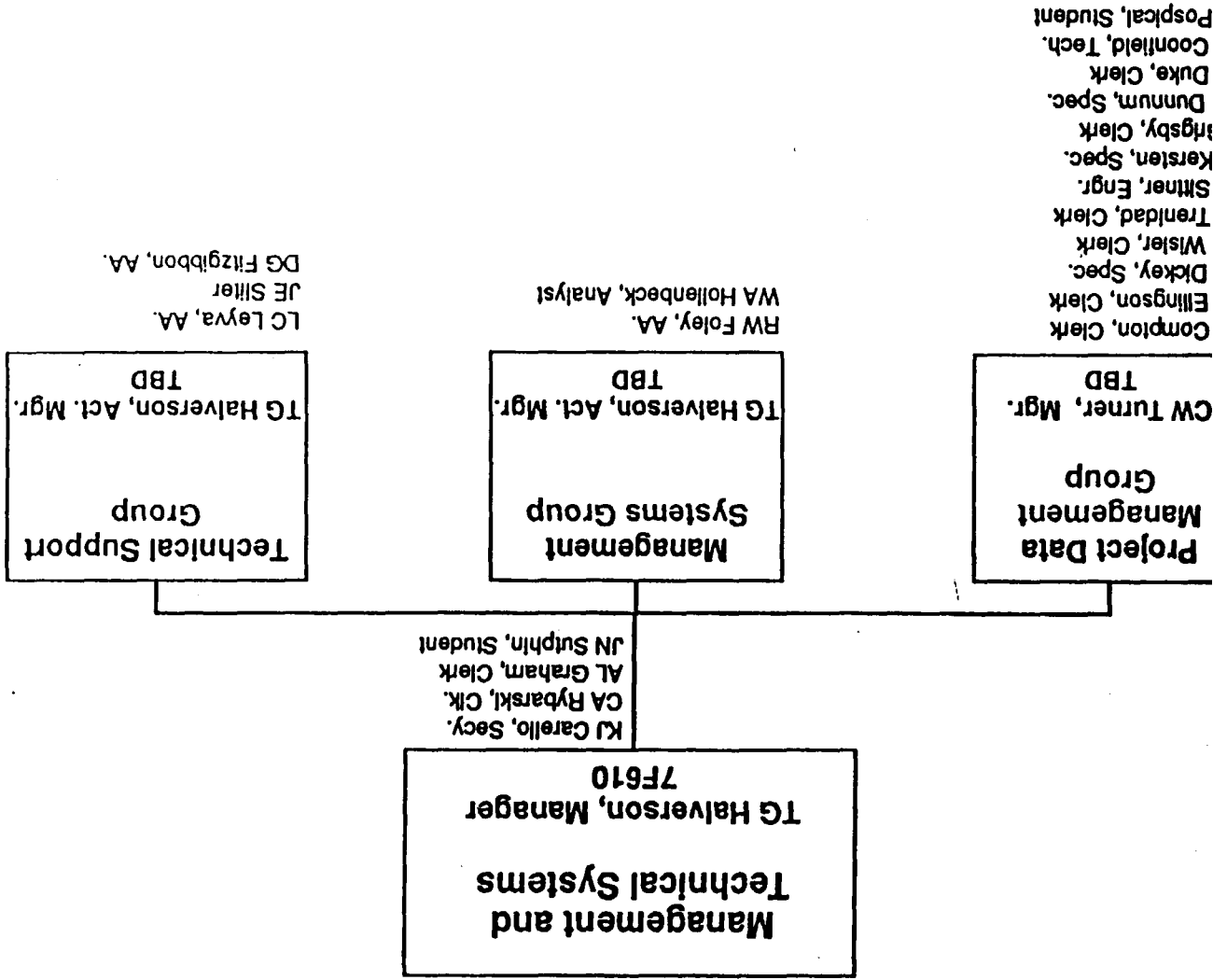
**Finding** -- A statement of fact documenting a deviation from an applicable Federal law, DOE Order, Standard, safety requirement, performance standard, or approved procedure.

**Noteworthy Practices** -- Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

**Observation** -- An issue that is not in violation of any written procedure or requirement, but in the judgment of the Assessment Team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Violation** -- An operational issue, discovered during the Assessment, which may have existed for a period of time prior to the Assessment and is reportable under the site approved Occurrence Reporting System.

# Management and Technical Systems



## Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-1  
Review Area: Conduct of Operations Program  
Responsible Individual: D. B. Branch, Jr.

page 1

**I. Performance Objective: C-COO-1**

(List the Performance Objective number and description from the Assessment Program)

The requirements of DOE Order 5480.19 have been adequately planned for implementation and will be of a level of quality required by today's performance standards complex-wide.

**II. Expectations:**

(Provide the expectations for the Performance Objective as stated in the Assessment Program)

Upon completion of Performance Objective C-COO-1, the Assessment Team should be able to determine if:

- a. The Y-12 Plant Conduct of Operations Program as planned and being implemented will be sufficiently comprehensive.
- b. The Y-12 Program will have adequate resources and adequate management involvement.
- c. The Y-12 Program will meet today's DOE-wide standards for an adequate Conduct of Operations Program.

**III. Review Criteria:**

(Provide the criteria used for conducting the review.)

The Conduct of Operations Program at the Y-12 Plant meets today's quality level expected within the DOE-complex. The Program should promote adequate Conduct of Operations performance when implemented.

**Assessment Form 1**

Date: 11/7/95

Assessment Form 1 No.: C-COO-1  
Review Area: Conduct of Operations Program  
Responsible Individual: D. B. Branch, Jr.

page 2

**IV. Approach:**

(List the procedures and documents reviewed, names and titles of personnel interviewed, references used, and evolutions observed.)

This part of the review was conducted over the course of six days and included numerous meetings, interviews, and discussions with senior managers, mentors, operations management personnel, walkthroughs, and tours of RSS and DUO facilities, interview of operators, and evaluation of drills, evolutions, surveillances, RADCON practices, and Conduct of Operations documentation in RSS and DUO facilities. Management discussions included the Vice President, the Deputy Vice President, management mentors (3), the Nuclear Operations Manager, the Deputy Nuclear Operations Manager, and the Conduct of Operations Coordinator. This Form 1 covers the broader plant-wide programmatic issues developed over the course of the assessment. Additional Forms 1 are included which cover specific facilities subject to the review. Because Conduct of Operations is in the earliest stages of development and implementation at Y-12, the review focused primarily on resumed facilities. The balance of the plant will not be ready for detailed assessment until the Y-12 Plant-wide Conduct of Operations Program has been developed and implemented. The Plant is working toward this end at the present. Some areas were observed outside the resumed facilities, but they were usually coincident with making observations in the resumed facilities. An inspection of the Steam Plant did reveal that its management is taking the initiative to implement Conduct of Operations based on the general requirements of the Nuclear Operations Conduct of Operations Manual and is making good progress. The facilities reviewed comprehensively were the Warehouse (9720-5), the portions of Buildings 9204-2E, 9204-4, 9215, and 9998 in which Receipt, Storage, and Shipment activities take place, and the portions of Building 9201-5, 9201-5N, 9204-4, 9212, 9215, 9996, and 9998 in which Depleted Uranium Operations activities take place. As a result of the assessment methodology, it is necessary to review this Form 1 and attached Forms 2, and those for the individual facilities, and those of a broader nature which evaluated Training and Drills, the Procedures Program, the Lockout/Tagout Program, and Support organizations.

**Records Reviewed:**

- July 10, 1995 - Letter from D. J. Bostock to DOE, Oak Ridge Operations, Re-evaluation of Conduct of Operations Implementation
- July 28, 1995 - Letter from T. R. Butz to DOE, Oak Ridge Operations, Conduct of Operations Implementation
- Internal memo, J. Flynn to R. Roosa, Conduct of Operations Baseline Assessment, March 23, 1995
- The August 28 - September 7, 1995 Readiness Assessment for Receipt, Storage, and Shipment of Special Nuclear Materials at Oak Ridge Y-12 Plant, Volumes I and II
- Y/NO-00002, Corrective Action Plan for Y-12 Nuclear Criticality Safety Program, Criticality Safety Approvals and Operational Safety Requirements Supporting Receipt, Storage, and Shipment of Special Nuclear Materials
- Y/NO-00003, Status of Conduct of Operations Program in Response to DNFSB Recommendation 94-4 (May 19, 1995)
- Nuclear Operations Conduct of Operations Manual
- July 13, 1995 Letter from Gordon G. Fee to DOE, Oak Ridge Operations, Commitments Related to the Defense Nuclear Facilities Safety Board Recommendation 94-4
- Y/DD-679 Preliminary Evaluation of the Y-12 Nuclear Criticality Safety Program, Criticality Safety Approvals, and Operational Safety Requirements Supporting Receipt, Storage, and Shipment of Special Nuclear Materials, April 26, 1995

**Assessment Form 1**

Date: 11/7/95

Assessment Form 1 No.: C-COO-1

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Review Area: Conduct of Operations Program

Responsible Individual: D. B. Branch, Jr.

- Internal Report, Evaluation of Criticality Safety Discrepancy Data, October 12, 1994, which is Appendix A to Y/DD-679.
- Y/AD-623, Plan for Continuing and Resuming Operations, Oak Ridge Y-12 Plant, October 1994
- February 1995, Implementation Plan for DNFSB Recommendation 94-4 Deficiencies in Criticality Safety at the Oak Ridge Y-12 Plant
- Y/AD-622, Type C Investigation of the Y-12 Plant Criticality Safety Approval Infractions Event at Building 9204-2E on September 22, 1994
- Y/AD-630, LMES, Inc. Readiness Assessment Report for the Resumption of Receipt, Storage, and Shipment of Special Nuclear Material at the Oak Ridge Y-12 Plant, August 18, 1995
- Readiness Assessment for Receipt, Storage, and Shipment of Special Nuclear Material at the Oak Ridge Y-12 Plant, August 18, 1995
- DOE, Oak Ridge Operations Assessment of the Depleted Uranium Operations and Support Functions at the Y-12 Plant, September 26, 1995

## Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-1  
Review Area: Conduct of Operations Program  
Responsible Individual: D. B. Branch, Jr.

page 4

**V. Discussion of Results with Basis:**

(Document the results of the review in sufficient detail using both the review criteria and the expectation statement as guidance.)

The purpose of this Performance Objective was to assess if the Conduct of Operations requirements have been adequately planned for implementation and will be of a level of quality required by today's performance standards complex-wide.

Management has been adequately involved in the development of the overall program. Although line management has not yet commenced the regular self assessments currently routine in mature programs at other sites, the first-line supervisors and line managers are directly involved in the oversight of operations activities in the facilities evaluated in RSS and DUO. The organization structure has undergone several changes since resumption has started. New managers who understand disciplined operations and Conduct of Operations are being put in positions of responsibility which will impact improved performance. Because implementation planning for plant-wide Conduct of Operations is now ongoing, the lessons learned from the resumed facilities, and the continuing use of mentors to assist with implementation should carry over plant-wide. A Conduct of Operations coordinator for the plant was recently appointed, and that individual has been in discussions with team members for advice about structuring the Y-12 program. During interviews, plan-of-the-day meetings, crew briefings, involvement in procedure validations, and observation of personal involvement by first-line managers, there has been an adequate overall demonstration of ownership and management in the operational facilities evaluated. The Mentor Program was reviewed in order to offer recommendations for improving the effectiveness of the program. The mentors were observed first-hand in the evaluated facilities, and their personal involvement by helping the facilities with implementation, and conducting oversight and assessments, has been instrumental in making the facilities ready for resumption. The Mentor Program has expanded so that mentors are now in numerous areas of the plant. It is appropriate that the Mentor Program effectiveness be self assessed by the plant as part of the Corrective Action Plan which will follow this assessment. It is recommended that several additional management mentors be utilized since making progress plant-wide is a significant undertaking based on experience at other sites. Consideration should be given to increasing mentoring in areas such as EUO where progress has been significantly behind the resumed areas. It is also recommended that mentors be more coordinated by having frequent mentor meetings in which they share experience, lessons learned, and receive guidance about priority areas in which to work as time progresses. During future periods of resumption, performance indicators should be developed and used to show real progress. Mentors could develop this based on experience at other sites. Items which should be tracked routinely are maintenance backlog, CSA infractions status, performance against goals and objectives, and personnel-related and total occurrences. The training and drill programs were assessed to determine their adequacy based on other site experience. As noted in the Training and Drill Program Forms 1, the plant programs are still immature and behind other sites. During resumption, significant regular on-the-floor training was conducted in RSS and DUO facilities. It was noted that regular on-the-floor training is not being conducted regularly as a matter of routine today. It is recommended that robust on-the-floor continuing training be continued in resumed facilities, and that it be expanded plant-wide near term since that has proven to be the most effective mechanism at the other sites for promoting culture change, teaching requirements, and achieving the disciplined Conduct of Operations approach to all activities. This type of continuing training can be efficiently accommodated by taking advantage of crew briefings, which are part of the routine. Experience has shown that assembling all operations and support personnel together very regularly in facilities for ongoing training is very effective. The Conduct of

## Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-1  
Review Area: Conduct of Operations Program  
Responsible Individual: D. B. Branch, Jr.

page 5

Operations Implementation Plan for the plant is still being developed. Based on the result of applying the graded approach and defining roles and responsibilities in RSS and DUO facilities, the foundation has been put in place for developing this program for the plant. Significantly experienced personnel are available at other sites to offer advice and assistance. There was evidence of some progress in Phases III and IV involving criticality safety as defined in Y/AD-623, Plan for Continuing and Resuming Operations. However, serious shortfalls were noted in effective implementation in Form 2, C-C003-1, and this is an area that needs significant improvement. Staffing and reorganization initiatives to improve this area have been initiated. The supporting infrastructure programs were assessed to see if they will adequately support a satisfactory Conduct of Operations program. Deficiencies were noted in implementation and effectiveness in many areas. In general, the support program areas evaluated were below today's standards. The Lockout-Tagout program was satisfactory overall. The training and drill programs are immature and need strengthening. The procedure program needs considerable improvement as indicated in the Forms 1, and 2 in the Procedure Program.

The support groups performance is detailed in Support Forms 1, and during the course of the assessment, an evaluation of the adequacy of planned resources for satisfactorily implementing Conduct of Operations was made. Experienced personnel have been added to the staff in many important positions fundamental to implementation. Many are new. Mentors are in place to help with much of the administrative burden required, and to help train personnel. New management should avail themselves first-hand of how programs have been put in place at other DOE sites. Regular trips to other sites should be conducted to facilitate development of good program elements more efficiently. Similarly, other site personnel should be asked to conduct technical assistance visits to help Y-12 personnel develop their programs. This has worked well at other sites. First-line managers and supervisors should participate in this process as well as senior managers. From an overall perspective, a resumption program within DOE facilities is a significant undertaking based on experience at other facilities. Others have found that having a dedicated senior individual leading and directing the programmatic improvements and the culture change is effective. It is recommended that this be considered as part of the self assessments and planning which will take place to formulate the Corrective Action Plan resulting from this assessment. The Special Operations observation results are included in facility-specific Forms 1 and 2. The observation of the transfer of SNM material from the warehouse to the QE areas indicated that Conduct of Operations practices in this area are adequate.

It is recommended that Plant Management assess the collective significance of the findings, concerns, and observations in this report, to include their generic implications, in order to understand the breadth and depth of the actions which should be included in the Corrective Action Plan. Other sites have found that thoroughly evaluating the deficient conditions, and charting a path forward consistent with budget and resource realities results in a credible, and achievable program over a realistic time-frame.



## Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-1  
Review Area: Conduct of Operations Program  
Responsible Individual: D. B. Branch, Jr.

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**VI. Conclusion:**

(Concluding statement based on the discussion of results. The statement should conclude whether the criteria of the objective was met.)

Although the Conduct of Operations Program at the Y-12 Plant does not currently meet today's quality level expected within the DOE-complex, there is sufficient evidence to indicate that the process underway can lead to an adequate Conduct of Operations Program when implemented.

Based on evaluating program effectiveness in resumed activities overall, the program being planned can be sufficiently comprehensive. Resources are being provided to implement and sustain the program. Experience at other sites has indicated that sustaining the improvement, and then striving for continuing improvement is a significant challenge. Based on the assessment of the planned path forward, which is only partially formalized at present, the program can meet today's standards if management involvement remains intensive and focused on technical and operational improvement. The criteria of the objective was partially met.

## Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-1

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Review Area: Conduct of Operations Program

Responsible Individual: D. B. Branch, Jr.

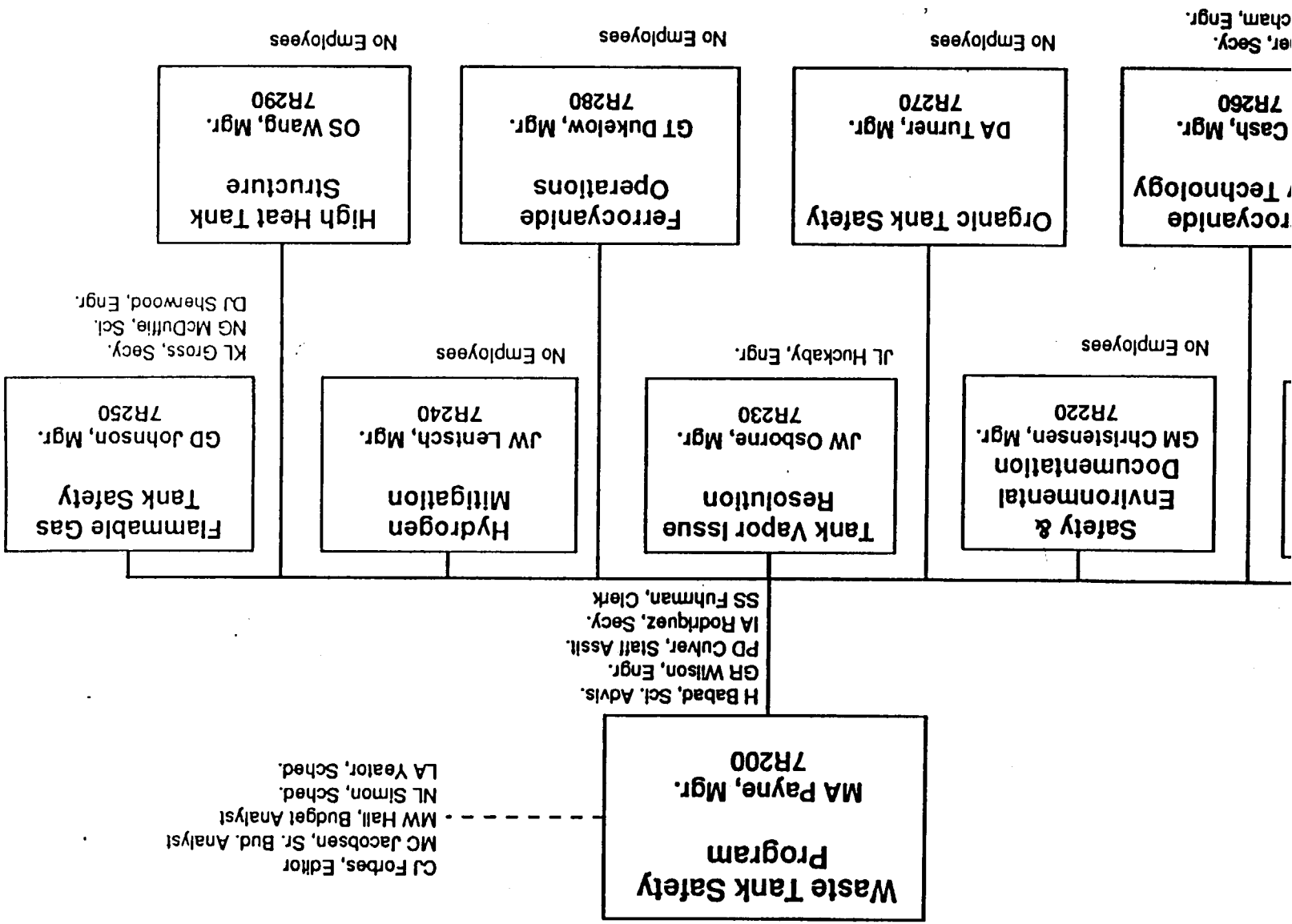
**VII. Issues:**

(List any issues identified as part of this review. All issues should also be documented on Assessment Form 2.)

The issues identified in this Form 1 and attached Forms 2 are indicated below. Other findings, concerns, and observations which impact Conduct of Operations are included in separate Forms 1 for the facilities, support, and program areas. Issues identified are:

- Finding:** The Plant Conduct of Operations Matrices of Applicability and Implementation Plan have not yet been developed as required in DOE Order 5480.19. (Form 2, C-COO-1-1)
- Finding:** Line management is not conducting routine Conduct of Operations assessments as required by the Y-12 Plant Management Assessment Program (Y60-028) requirements and DOE Order 5480.19. (Form 2, C-COO-1-2)
- Concern:** DOE monthly assessments are not acted upon by management. (DOE Y-12 Site Office Monthly Report) (Form 2, C-COO-1-3)
- Finding:** Occurrence reporting does not meet DOE Order 5000.3B requirements. For example, violations of procedures and items of management interest are not required to be reported. (Form 2, C-COO-1-4)
- Finding:** The Nuclear Operations Conduct of Operations Manual Chapter on Rounds does not incorporate the requirements to inspect for correct placement of tags and locks as specified in DOE-STD-1030-92, Guide to Good Practices for Lockouts and Tagouts, Section 4.8. (Form 2, C-COO1-5)
- Concern:** General lighting in many facilities is inadequate, based on observation during visits and tours. Housekeeping conditions in some areas need improvement. Examples were noted in Building 9998, 9204-2E, 9201-5, and the Fire Station. This is contrary to good housekeeping practices required by DOE Order 5480.19. (Form 2, C-COO1-6)
- Concern:** A Plant Conduct of Operations Manual has not yet been developed. (Form 2, C-COO1-7)
- Finding:** Performance goals as required by DOE Order 5480.19 and the Nuclear Operations Conduct of Operations Manual are not currently being maintained as required by the Order and Manual. (Form 2, C-COO1-8)
- Concern:** Communications practices are not in conformance with DOE Order 5480.19, Chapter IV. (Form 2, C-COO-1-9)
- Observation:** Routine activities impacting Conduct of Operations are not standardized. (Form 2, C-COO-1-10)

# Waste Tar Safety Program



Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1-1

page 1

Review Area: Conduct of Operations Program for the Y-12 Plant

Responsible Individual: D. B. Branch, Jr.

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or find Finding, Concern, Observation or Noteworthy Practice):

Finding: The Plant Conduct of Operations Matrices of Applicability and Implementation Plan have not yet been developed as required in DOE Order 5480.19.

B. Information Requested

(List any information needed to further evaluate this item):

NA

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1-1

page 3

Review Area: Conduct of Operations Program for the Y-12 Plant

Responsible Individual: D. B. Branch, Jr.

III. Approval Section (Signatures)

Originator Paul Blaney Date 11/9/95

Approved Paul Blaney Date 11/9/95

Suggested Corrective Action:

Develop the required matrices and plan for local DOE approval. Discussions indicated that this effort is currently ongoing at the Plant, and that submission over the next quarter is anticipated. It is recommended that DOE Order 5480.19 Chapter III and XIII requirements be closely evaluated to ensure that implementation planning accounts for these requirements and is consistent with practices at other DOE sites. Additionally, it is recommended that all Required Reading Programs in Operations and Support Organizations include the DOE ONS weekly summaries since these have valuable information in a form convenient for Required Reading and presentation at Crew Briefing sessions.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1-2

page 1

Review Area: Conduct of Operations Program for the Y-12 Plant

Responsible Individual: D. B. Branch, Jr.

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

Line management is not conducting routine Conduct of Operations assessments as required by the Y-12 Plant Management Assessment Program (Y60-028) requirements and DOE Order 5480.19.

B. Information Requested

(List any information needed to further evaluate this item):

N/A

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1-2

page 2

Review Area: Conduct of Operations Program for the Y-12 Plant

Responsible Individual: D. B. Branch, Jr.

**II. Basis Section**

**For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).**

**For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.**

**For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.**

**For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.**

**A. Description of Basis:**

DOE Order 5480.19, Chapter I and the Plant Management Assessment Program (Y60-028) require that management conduct frequent, direct observation of operations activities. To date during resumption, Conduct of Operations assessments have only been conducted by mentors in Receipt, Storage, and Shipment facilities.

**B. Documents reviewed, activities performed, persons contacted (include titles):**

Interviews and discussions with:

Nuclear Operations Manager  
Management Mentors

Inspection of existing LMES Conduct of Operations assessment forms for operational facilities

# Strategic Planning & Systems Engineering

*[Signature]*  
Date

Strategic Planning  
& Systems  
Engineering  
JO Honeyman, Manager  
7K000

DK Brock, Exec. Secy.

TWRS Systems  
Engineering Modeling  
& Simulation  
PA Baynes, Mgr.  
7K200

CS Colgan  
GE Finn  
A Lee  
RS Wittman

TWRS Strategic  
Analysis  
RD Jensen, Mgr.  
7K300

KM Carlson  
MJ Simons

TWRS Systems  
Engineering  
Management Systems  
CE Wilson, Mgr.  
7K400

CA Kagela  
AJ Duckett  
WL Hellman

TWRS Strategic  
Planning  
HW Heacock, Mgr.  
7K500



Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1-3

page 1

Review Area: Conduct of Operations Program for the Y-12 Plant

Responsible Individual: D. B. Branch, Jr.

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

DOE monthly assessments are not acted upon by management (DOE Y-12 Site Office Monthly Report).

B. Information Requested

(List any information needed to further evaluate this item):

N/A

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1-3

page 2

Review Area: Conduct of Operations Program for the Y-12 Plant

Responsible Individual: D. B. Branch, Jr.

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).

For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.

For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.

For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

DOE monthly assessments in operational facilities are being forwarded to LMES Management as an important part of the overall effort to improve Conduct of Operations at the Plant. This is the DOE Y-12 Site Office monthly report. It contains many of the same kind of deficiencies observed by the team this week, and should be used by operations personnel and management.

B. Documents reviewed, activities performed, persons contacted (include titles):

Discussion with:

Nuclear Operations Manager  
Deputy Vice President, Defense and Manufacturing

III. Approval Section (Signatures)

Originator                     D. B. Branch                     Date           11/9/95          

Approved                     D. B. Branch                     Date           11/9/95          

Suggested Corrective Action:

Commence review and analysis of the DOE monthly reports so that unique and programmatic deficiencies are captured for corrective action as part of the resumption process.

**Assessment Form 2**

Date: 11/6/95

Assessment Form 2 No.: C-COO-1-3

page 3

Review Area: Conduct of Operations Program for the Y-12 Plant

Responsible Individual: D. B. Branch, Jr.

**IV. Contractor/DOE Response**

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_

Date \_\_\_\_\_

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1-4

page 1

Review Area: The Conduct of Operations Program for the Y-12 Plant

Responsible Individual: W. A. Condon

**Finding** -- A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** -- Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** -- Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** -- Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

Finding:

Occurrence reporting criteria of Y60-161 does not meet DOE Order 5000.3B requirements. For example, violations of procedures and items of management interest are not required to be reported.

Background:

Y60-161, Occurrence Reporting, was developed to implement the requirements of DOE Order 5000.3B. However, Y60-161 does not adequately implement the requirements in 5000.3B and many applicable criteria have been omitted from the site reporting matrix. As a result, occurrences which meet 5000.3B reporting criteria are not being identified and reported. Additionally, management has not been sensitized to the importance of the reporting process and the threshold of reporting occurrences is too high. Examples of reporting inadequacies include: (1) failure to comply with procedure requirements and DOE commitments for performance of material control and accountability inventories, and (2) numerous CSA violations which were identified as below the reporting criteria but were not evaluated as a programmatic deficiency.

B. Information Requested

(List any information needed to further evaluate this item):

N/A

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1-4

page 2

Review Area: The Conduct of Operations Program for the Y-12 Plant

Responsible Individual: W. A. Condon

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
 For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
 For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
 For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

DOE Order 5000.3B

B. Documents reviewed, activities performed, persons contacted (include titles):

Records Reviewed:

Y60-161 Occurrence Reporting

Interviews Conducted:

Material Accountability Personnel

III. Approval Section (Signatures)

Originator W A Condon Date 11/8/95

Approved Dell Blaney Date 11/9/95

Suggested Corrective Action:

- Develop site occurrence reporting matrix which clearly implements DOE guidance.
- Train facility personnel on reporting requirements to ensure consistent implementation and sensitivity to occurrences.

**Assessment Form 2**

Date: 11/6/95

**Assessment Form 2 No.: C-COO-1-4**

page 3

**Review Area: The Conduct of Operations Program for the Y-12 Plant**

**Responsible Individual: W. A. Condon**

**IV. Contractor/DOE Response**

*(Provide results of Contractor/DOE review with technical basis and references.)*

Accepted By: \_\_\_\_\_

Date \_\_\_\_\_

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1-5

page 1

Review Area: Conduct of Operations Program for the Y-12 Plant

Responsible Individual: D. B. Branch, Jr.

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final **Finding**, Concern, Observation or Noteworthy Practice):

The Nuclear Operations Conduct of Operations Manual chapter on rounds does not incorporate the requirement to inspect for correct placement of tags and locks as specified in DOE-STD-1030-92, Guide to Good Practices for Lockouts and Tagouts, Section 4.8.

B. Information Requested

(List any information needed to further evaluate this item):

N/A

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1-5

page 2

Review Area: Conduct of Operations Program for the Y-12 Plant

Responsible Individual: D. B. Branch, Jr.

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).

For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.

For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.

For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.


A. Description of Basis:


The DOE standard for Lockouts and Tagouts (DOE-STD-1030-92) includes a requirement in Section 4.8 that rounds include inspection for the correct placement of tags and locks. Since the Nuclear Operations Conduct of Operations Manual will be used as a basis for developing the Site Conduct of Operations Manual, it needs to be revised.

B. Documents reviewed, activities performed, persons contacted (include titles):

- Nuclear Conduct of Operations Manual for the Y-12 Plant
- DOE-STD-1030-92
- DOE Order 5480.19

III. Approval Section (Signatures)

Originator  Date 11/9/95

Approved  Date 11/9/95

Suggested Corrective Action:

Revise the Nuclear Conduct of Operations Manual to bring it into compliance with the DOE standard, and conduct training across the Plant accordingly.



Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1-5

page 3

Review Area: Conduct of Operations Program for the Y-12 Plant

Responsible Individual: D. B. Branch, Jr.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_

Date \_\_\_\_\_

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1-6

page 1

Review Area: Conduct of Operations Program for the Y-12 Plant

Responsible Individual: D. B. Branch, Jr.

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern Observation or Noteworthy Practice):

General lighting in many facilities is inadequate based on observation during visits and tours. Housekeeping conditions in some areas need improvement. Examples were noted in Building 9998, 9204-2E, 9201-5, and the Fire Station. This is contrary to good housekeeping practice required by DOE Order 5480.19.

B. Information Requested

(List any information needed to further evaluate this item):

N/A

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1-6

page 2

Review Area: Conduct of Operations Program for the Y-12 Plant

Responsible Individual: D. B. Branch, Jr.

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).

For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.

For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.

For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

During tours and visits to numerous facilities during the assessment, it was noted that in many locations lighting was not adequate for the area. Specific housekeeping deficiencies were noted in Buildings 9998, 9204-2E, 9201-5, and the Fire Station. Several "jury-rigs" were noted in DUO facilities.

B. Documents reviewed, activities performed, persons contacted (include titles):

- Observation by team personnel during tours, inspections, and drills.
- DOE Order 5480.19

III. Approval Section (Signatures)

Originator *D. B. Branch* Date 11/9/95

Approved *D. B. Branch* Date 11/9/95

Suggested Corrective Action:

The good housekeeping practices observed in the warehouse and QE areas should be expanded to the remainder of the plant. Management assessments should add housekeeping to the regular program to improve this at the plant.

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1-6

page 3

Review Area: Conduct of Operations Program for the Y-12 Plant

Responsible Individual: D. B. Branch, Jr.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_

Date \_\_\_\_\_

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1-7

page 1

Review Area: Conduct of Operation Program for the Y-12 Plant

Responsible Individual: D. B. Branch, Jr.

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

A Plant Conduct of Operations Manual has not yet been developed.

B. Information Requested

(List any information needed to further evaluate this item):

N/A

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1-7

page 2

Review Area: Conduct of Operation Program for the Y-12 Plant

Responsible Individual: D. B. Branch, Jr.

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).

For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.

For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.

For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

Due to the complexity and widely varying operational and support activities at the Y-12 Plant, a Plant-wide Conduct of Operations Manual should be promulgated near term to provide for clear definition of requirements, provide for implementation matrices development activity, and provide the basis for the wide spread continuing training that needs to be accomplished to bring organizations not yet resumed up to current performance standards. Although a planned activity, early development will be significantly instrumental in promoting the growth of Conduct of Operations Plant-wide.

B. Documents reviewed, activities performed, persons contacted (include titles):

Discussion with Nuclear Operations Manager and Management Mentors

III. Approval Section (Signatures)

Originator D. B. Branch Date 11/9/95

Approved D. B. Branch Date 11/9/95

Suggested Corrective Action:

In view of the importance to the plant for improving the rate of Conduct of Operations implementation plant-wide, it is recommended that development of the Manual be expedited. Experience at other sites has indicated that a well written manual is fundamental to spreading Conduct of Operations Plant-wide.

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1-7

page 3

Review Area: Conduct of Operation Program for the Y-12 Plant

Responsible Individual: D. B. Branch, Jr.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_

Date \_\_\_\_\_

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1-8

page 1

Review Area: Conduct of Operations Program for the Y-12 Plant

Responsible Individual: D. B. Branch, Jr.

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final **Finding**, Concern, Observation or Noteworthy Practice):

Performance goals as required by DOE Order 5480.19 and the Nuclear Operations Conduct of Operations Manual are not currently being maintained.

B. Information Requested

(List any information needed to further evaluate this item):

N/A



Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1-8

page 2

Review Area: Conduct of Operations Program for the Y-12 Plant

Responsible Individual: D. B. Branch, Jr.

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).

For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.

For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.

For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

DOE Order 5480.19 specifies that Safety, Environment, and Operating Goals should be utilized, and the Nuclear Operations Conduct of Operations Manual (Chapter I, Section VI) promulgates the requirement for Nuclear Operations facilities. The manual also specifies that performance indicators (PI) be developed and used. None of these were observed in use, although a PI for tracking Conduct of Operations implementation status in RSS facilities is in use.

B. Documents reviewed, activities performed, persons contacted (include titles):

Observation in facilities during inspections, tours, and drills, and discussion with Nuclear Operations Management Mentors.

III. Approval Section (Signatures)

Originator  Date 11/9/95

Approved  Date 11/9/95

Suggested Corrective Action:

It is recommended that copies of good programs currently in use at other facilities, such as Rocky Flats, for both plant and facility performance indicators be obtained to facilitate development of a program at Y-12 as part of the resumption program.

**Assessment Form 2**

Date: 11/6/95

Assessment Form 2 No.: C-COO-1-8

page 3

Review Area: Conduct of Operations Program for the Y-12 Plant

Responsible Individual: D. B. Branch, Jr.

**IV. Contractor/DOE Response**

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_

Date \_\_\_\_\_

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1-9

page 1

Review Area: Conduct of Operations Program at the Y-12 Plant

Responsible Individual: D. B. Branch, Jr.

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

Communications practices are not in conformance with DOE Order 5480.19, Chapter IV.

B. Information Requested

(List any information needed to further evaluate this item):

N/A

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1-9

page 2

Review Area: Conduct of Operations Program at the Y-12 Plant

Responsible Individual: D. B. Branch, Jr.

**II. Basis Section**

**For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).**

**For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.**

**For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.**

**For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.**

**A. Description of Basis:**

DOE Order 5480.19, Chapter IV specifies the requirements for several types of communications practice required in the DOE Complex. None of the facility evolutions and drills observed were using communications meeting today's expectations for formality. Similarly, in many areas visited, public address announcements were not understandable. In most cases observed, workers did not routinely stop to listen to announcements. These observations indicate a lack of overall discipline in the area of communications.

**B. Documents reviewed, activities performed, persons contacted (include titles):**


Observation during tours, evolutions, and drills in multiple facilities visited during the course of the assessment.


Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1-9 page 3  
Review Area: Conduct of Operations Program at the Y-12 Plant  
Responsible Individual: D. B. Branch, Jr.

III. Approval Section (Signatures)

Originator  Date 11/9/95

Approved  Date 11/9/95

Suggested Corrective Action:

Improvement in all aspects of communications discipline has been found to be instrumental at other sites in the complex for improving the overall Conduct of Operations discipline. Emphasis should be placed on oral communications when conducting evolutions so that orders and repeatbacks become part of the routine when required. It is recommended that surveys be conducted to identify inadequate announcing system audibility in the plant. Routine emphasis on all areas of communications required in the DOE Order should be increased as part of the resumption effort.

IV. Contractor/DOE Response  
(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1-10

page 1

Review Area: Conduct of Operations Program for the Y-12 Plant

Responsible Individual: D. B. Branch, Jr.

**Finding** -- A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** -- Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** -- Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** -- Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

Routine activities impacting Conduct of Operations are not standardized.

B. Information Requested

(List any information needed to further evaluate this item):

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1-10

page 2

Review Area: Conduct of Operations Program for the Y-12 Plant

Responsible Individual: D. B. Branch, Jr.

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).

For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.

For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.

For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

Plan-of-the-day meetings, pre-drill briefs, crew briefings, and pre-evolution briefings were observed in many facilities during the assessment. All were conducted differently, suggesting the need to institutionalize a standard in order to promote improved performance and adherence to requirements. It is common practice at other DOE sites to include plan-of-the-day, crew and pre-shift briefings, and pre-evolution briefing guidance in the Plant Conduct of Operations Manual. This prompts improvement in the Conduct of Maintenance and Operations, and has been very instrumental in making improvement at other sites. It is recommended that standardized requirements be included in the Plant Conduct of Operations Manual due to the fundamental importance for improving overall work force operational discipline as the resumption process continues.

B. Documents reviewed, activities performed, persons contacted (include titles):

Observation of evolutions, drills, and activities during the assessment.

III. Approval Section (Signatures)

Originator D. B. Branch Date 11/9/95

Approved D. B. Branch Date 11/9/95

Suggested Corrective Action:

Develop standards for these activities in order to promote increased formality and discipline, and promulgate the requirements in the Plant Conduct of Operations Manual.

**Assessment Form 2**

Date: 11/6/95

**Assessment Form 2 No.: C-COO-1-10**

page 3

**Review Area: Conduct of Operations Program for the Y-12 Plant**

**Responsible Individual: D. B. Branch, Jr.**

**IV. Contractor/DOE Response**

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_



**Assessment Form 1**

Date: 11/7/95

Assessment Form 1 No.: C-COO-2

page 1

Review Area: Conduct of Operations Implementation

Responsible Individual: D. B. Branch, Jr.

**I. Performance Objective: C-COO-2**

(List the Performance Objective number and description from the Assessment Program)

The quality level of implementation of DOE Order 5480.19 in facilities is adequate based on today's DOE-wide performance standards.

**II. Expectations:**

(Provide the expectations for the Performance Objective as stated in the Assessment Program)

Upon completion of Performance Objective C-COO-2, the Assessment Team should be able to determine the quality level of the implemented Conduct of Operations elements relative to benchmarked programs and to determine if:

- a. Ownership and understanding of Conduct of Operations requirements by the work force are adequate based on today's standards.
- b. Work is conducted according to Conduct of Operations requirements.

**III. Review Criteria:**

(Provide the criteria used for conducting the review.)

The quality level of implemented elements of DOE Order 5480.19 in facilities meets today's DOE-wide performance standards based on the Assessment Team's experience with Rocky Flats, Pantex, and Savannah River Site's Conduct of Operations Program performance.

## Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-2

page 2

Review Area: Conduct of Operations Implementation

Responsible Individual: D. B. Branch, Jr.

## IV. Approach:

(List the procedures and documents reviewed, names and titles of personnel interviewed, references used, and evolutions observed.)

This assessment activity was conducted over the course of six days and included numerous meetings, interviews, and discussions with Senior Managers, Mentors, Operations Management personnel, walkthroughs and tours of RSS and DUO facilities, operator interviews, observation of drills and evaluations, surveillances, and RADCON practices in order to assess the quality level of implementation. Senior Management discussions included the Vice President, the Deputy Vice President, Management Mentors (3), the Nuclear Operations Manager, the Deputy Nuclear Operations Manager, and the Conduct of Operations Coordinator. This Form 1 covers the overall perspective on facility implementation status, and the Forms 1 and 2 for the individual facilities included in other sections of the report contribute to the conclusions reached in this Form 1. Today, Conduct of Operations is still in the early stages of implementation at Y-12, hence the review had to focus primarily on the facilities which have been resumed. Judgements about the overall plant status are based on the detailed reviews conducted in the resumed facilities. Facilities reviewed comprehensively were the Warehouse (9720-5), the portions of Buildings 9204-2E, 9204-4, 9215, and 9998 in which Receipt, Storage, and Shipment activities take place, and the portions of Building 9201-5, 9201-5N, 9204-4, 9212, 9215, 9996, and 9998 in which Depleted Uranium Operations activities take place.

## Records Reviewed:

The following documents were reviewed. Additional documents and personnel interfaces are detailed in the Forms 1 for the individual facilities reviewed:

- Y/DD-679, Preliminary Evaluation of the Y-12 Nuclear Criticality Safety Program, Criticality Safety Approvals, and Operational Safety Requirements Supporting Receipt, Storage, and Shipment of Special Nuclear Materials, April 26, 1995.
- Internal Report, Evaluation of Criticality Safety Discrepancy Data, October 12, 1994, which is Appendix A to Y/DD-679.
- Y/AD-623, Plan for Continuing and Resuming Operations, Oak Ridge Y-12 Plant, October 1994.
- February 1995 Implementation Plan for DNFSB Recommendation 94-4 Deficiencies in Criticality Safety at the Oak Ridge Y-12 Plant.
- Y/AD-622, Type C Investigation of the Y-12 Plant Criticality Safety Approval Infractions Event at Building 9204-2E on September 22, 1994.
- July 10, 1995 Letter from D. J. Bostock to DOE, Oak Ridge Operations, Re-evaluation of Conduct of Operations Implementation.
- July 28, 1995 Letter for T. R. Butz to DOE, Oak Ridge Operations, Conduct of Operations Implementation.
- Internal memo, J. Flynn to R. Roosa, Conduct of Operations Baseline Assessment, March 23, 1995.
- The August 28-September 7, 1995 Readiness Assessment for Receipt, Storage, and Shipment of Special Nuclear Material at Oak Ridge Y-12 Plant, Volumes I and II.
- Y/NO-00002, Corrective Action Plan for Y-12 Nuclear Criticality Safety Program, Criticality Safety Approvals and Operational Safety Requirements Supporting Receipt, Storage, and Shipment of Special Nuclear Materials.
- Y/NO-00003 Status of Conduct of Operations Program in Response to DNFSB Recommendation 94-4 (May 19, 1995).

## Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-2

page 3

Review Area: Conduct of Operations Implementation

Responsible Individual: D. B. Branch, Jr.

- Nuclear Operations Conduct of Operations Manual.
- July 13, 1995 Letter from Gordon G. Fee to DOE, Oak Ridge Operations, Commitments Related to the Defense Nuclear Facilities Safety Board Recommendation 94-4.
- Y/AD-630, LMES, Inc. Readiness Assessment Report for the Resumption of Receipt, Storage, and Shipment of Special Nuclear Material at the Oak Ridge Y-12 Plant, August 18, 1995.
- DOE Oak Ridge Operations Assessment of the Depleted Uranium Operations and Support Functions at the Y-12 Plant, September 26, 1995.

**V. Discussion of Results with Basis:**

(Document the results of the review in sufficient detail using both the review criteria and the expectation statement as guidance.)

The purpose of this Performance Objective was to evaluate the quality level of implementation of DOE Order 5480.19 relative to what is considered adequate based on today's DOE-wide performance standard. Implementing directives utilized for implementing the program elements were evaluated in the facilities assessed. These were determined to be adequate overall. The process of using appendices to the Nuclear Operations Conduct of Operations Manual and Standing Orders have been effective for specifying detailed requirements in the buildings. Expansion of this to the remainder of the Plant in due course should similarly be effective. The implementation plans for the evaluated facilities were adequate, and the implementation progress status is closely tracked by Mentors in RSS facilities. This practice should start in DUO facilities, and in others as their Conduct of Operations Matrices of Applicability and Implementation Plans are developed. The graded approach has been adequately implemented in RSS and DUO facilities. With continued mentoring and consistent management oversight, the assessed facilities should achieve a quality program meeting today's standards in the complex.

For the resumed facilities, the implementation quality and status of each required chapter of DOE Order 5480.19 was evaluated relative to benchmarked programs (Rocky Flats, Pantex, Savannah River Site). A methodology using weighted values for various sections as they affect disciplined operations, and a methodology for assigning implementation status percentage achievement were used to arrive at a computed implementation status percentage. This method is used at other sites in order to achieve a more objective measure of the maturity of the program since it is performance based. Y-12 Plant has a similar methodology in use which is consistent with the one used by the team. The team evaluations, and the assessments previously conducted by mentors and managers had close correlation. This indicates that the status based on today's standards is well understood at Y-12. Ownership and understanding of Conduct of Operations was closely evaluated. Specific comments are in the individual facility reports. Overall, the level observed in the assessed facilities was very adequate, and the first line management were taking their responsibilities seriously. There is no question about the facilities having made significant positive change since the resumption program started.

Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-2  
Review Area: Conduct of Operations Implementation  
Responsible Individual: D. B. Branch, Jr.

page 4

VI. Conclusion:

(Concluding statement based on the discussion of results. The statement should conclude whether the criteria of the objective was met.)

Although the criteria of the performance objective is not met for the balance of plant today, the assessed facilities performance does meet the criteria, recognizing that these facilities are currently only partially implemented. The success in achieving fully implemented status will depend on sustained mentoring, continued management involvement and assessment, and sustaining the performance for the long term.

VII. Issues:

(List any issues identified as part of this review. All issues should also be documented on Assessment Form 2.)

Specific issues for individual facilities are included in the Forms 1 and 2 for the facilities. No additional issues are included in this Form 1.

Originator D. B. Branch, Jr.

Date 11/9/95

Approved D. B. Branch, Jr.

Date 11/9/95

**Assessment Form 1**

Date: 11/7/95

Assessment Form 1 No.: C-COO-3  
Review Area: Corrective Actions Effectiveness  
Responsible Individual: D. B. Branch, Jr.

page 1

**I. Performance Objective: C-COO-3**  
(List the Performance Objective number and description from the Assessment Program)

The corrective actions planned and accomplished by the contractor have been adequate and effective in addressing Conduct of Operations deficiencies.

**II. Expectations:**  
(Provide the expectations for the Performance Objective as stated in the Assessment Program)

Upon completion of Performance Objective C-COO-3, the Assessment Team should be able to determine if:

- a. Conduct of Operations corrective actions taken and planned are adequate based on the root cause.
- b. Conduct of Operations corrective actions completed have been effective in improving work force performance.

**III. Review Criteria:**  
(Provide the criteria used for conducting the review.)

The corrective actions taken to date have been adequate and have been effective in implementing positive change in the work force in Conduct of Operations.

**Assessment Form 1**

Date: 11/7/95

**Assessment Form 1 No.: C-COO-3**  
**Review Area: Corrective Actions Effectiveness**  
**Responsible Individual: D. B. Branch, Jr.**

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**IV. Approach:**

(List the procedures and documents reviewed, names and titles of personnel interviewed, references used, and evolutions observed.)

This assessment activity was conducted over the course of six days and included meetings, interviews, and discussions with Senior Managers, Mentors, Operations Managers, Shift Managers, walkthroughs, and tours of RSS and DUO facilities, operator interviews, observation of drills and evolutions, surveillances, and procedure validations in order to assess if the actions planned and taken have been adequate and effective in addressing Conduct of Operations deficiencies. This Form 1 covers the overall aspects of the subject. Additional Forms 1 and 2 are included for individual facilities assessed.

**Records Reviewed:**

- Internal memo, J. Flynn to R. Roosa, Conduct of Operations Baseline Assessment, March 23, 1995
- The August 28 - September 7, 1995 Readiness Assessment for Receipt, Storage, and Shipment of Special Nuclear Material at Oak Ridge Y-12 Plant, Volume I and II
- Y/NO-00002, Corrective Action Plan for Y-12 Nuclear Criticality Safety Program, Criticality Safety Approvals and Operational Safety Requirements Supporting Receipt, Storage, and Shipment of Special Nuclear Materials
- Y/NO-00003, Status of Conduct of Operations Program in Response to DNFSB Recommendation 94-4 (May 19, 1995)
- Y/DD-679, Preliminary Evaluation of the Y-12 Nuclear Criticality Safety Program, Criticality Safety Approvals, and Operational Safety Requirements Supporting Receipt, Storage, and Shipment of Special Nuclear Materials, April 26, 1995
- Internal Report, Evaluation of Criticality Safety Discrepancy Data, October 12, 1994, which is Appendix A to Y/DD-679.
- Y/AD-623, Plan for Continuing and Resuming Operations, Oak ridge Y-12 Plant, October 1994
- February 1995, Implementation Plan for DNFSB Recommendation 94-4 Deficiencies in Criticality Safety at the Oak Ridge Y-12 Plant
- Y/AD-622, Type C Investigation of the Y-12 Plant Criticality Safety Approval Infractions Event at Building 9204-2E on September 22, 1994
- Y/AD-630, LMES, Inc. Readiness Assessment Report for the Resumption of Receipt, Storage, and Shipment of Special Nuclear Material at the Oak Ridge Y-12 Plant, August 18, 1995
- Readiness Assessment for Receipt, Storage, and Shipment of Special Nuclear Material at the Oak Ridge Y-12 Plant, August 18, 1995
- Readiness Assessment for Receipt, Storage, and Shipment of Special Nuclear Material at the Oak Ridge Y-12 Plant, Volumes I and II, August 28 - September 7, 1995

## Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-3  
Review Area: Corrective Actions Effectiveness  
Responsible Individual: D. B. Branch, Jr.

page 3

**V. Discussion of Results with Basis:**

(Document the results of the review in sufficient detail using both the review criteria and the expectation statement as guidance.)

The purpose of the Performance Objective was to assess if the corrective actions taken to date have been adequate and have been effective in implementing positive change in the work force in Conduct of Operations. As indicated in the recently conducted Readiness Assessment for Receipt, Storage, and Shipment of Special Nuclear Materials at the Oak Ridge Y-12 Plant (August 28 - September 7, 1995,) there is not an effective administrative system in place to collate and file objective evidence information for actions taken. The assessment used the available material, but depended on observations of performance in the workplace to make evaluations of the Performance Objective elements. The evaluation extends primarily to the assessed facilities as indicated in the Form 1 for Conduct of Operations, C-COO-1. Interviews in the assessed facilities indicated that operations personnel have been effectively communicated the root cause of the September 1994 CSA incident. They can discuss the background and the reason for the activities which have ensued to make improvement. The work force is supportive, and willing to continue to make improvement. The Conduct of Operations elements currently being implemented in the assessed facilities were assessed in Performance Objective C-COO-2 and were considered as part of this Performance Objective to determine if the actions taken and planned have been effective. Since the balance of plant is still at the early stages of implementation, there was no specific evaluation of areas outside of the assessed facilities other than those related to support groups observations which are separately included in the report. Interviews and observations clearly have indicated that the plant has been effective overall in making positive change in Conduct of Operations of the work force. Numerous deficiencies are included in the balance of this report, but the status today, and the trend, are indicative that the path forward can be effective with sustained hands-on management oversight and attention. Causal factors in the report on the Evaluation of Criticality Safety Discrepancy Data were reviewed and the breadth and scope of actions taken to date were evaluated in light of the continuing incidents of CSA infractions. This area has not been adequately covered in depth, and is included as a Finding in Form 2, C-COO3-1 attached.

**VI. Conclusion:**

(Concluding statement based on the discussion of results. The statement should conclude whether the criteria of the objective was met.)

The criteria was only partially met. The continuing CSA infraction incidents indicate that the depth of the problem is significant, and the plant's corrective actions to date have not been robust or comprehensive enough to achieve effective corrective action. The other areas outlined in the objective relative to overall Conduct of Operations in the assessed facilities were met.

**VII. Issues:**

(List any issues identified as part of this review. All issues should also be documented on Assessment Form 2.)

**Finding:** The corrective actions taken to correct the root causes of the September 1994 CSA incident have not been effective in all nuclear operations areas.

Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-3  
Review Area: Corrective Actions Effectiveness  
Responsible Individual: D. B. Branch, Jr.

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Originator *D. B. Branch* Date 11/9/95

Approved *D. B. Branch* Date 11/9/95



Assessment Form 2

Date: 11/7/95

Assessment Form 2 No.: C-COO-3-1  
Review Area: Corrective Action Effectiveness  
Responsible Individual: D. B. Branch, Jr.

page 1

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.  
**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.  
**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.  
**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final **Finding**, Concern, Observation or Noteworthy Practice):

- **Finding:** The corrective actions taken to correct the root cause of the September 1994 CSA incident have not been effective in all nuclear operations areas.

B. Information Requested

(List any information needed to further evaluate this item):

N/A

## Assessment Form 2

Date: 11/7/95

Assessment Form 2 No.: C-COO-3-1  
Review Area: Corrective Action Effectiveness  
Responsible Individual: D. B. Branch, Jr.

page 2

## II. Basis Section

**For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.**

## A. Description of Basis:

The LMES Internal Report, Evaluation of Critically Safety Discrepancy Data was reviewed to determine its comprehensiveness and effectiveness. Causal factor four indicated appropriately that employees are not always fully aware of the content of CSAs and detail of procedural requirements. Reviews of assessments conducted in the past seven months revealed continuing deficiencies in CSA compliance, and other Conduct of Operations deficiencies. This includes the March 23, 1995 Internal memo, J. Flynn to R. Rossa, Conduct of Operations Baseline Assessment in the six Y-12 resumption areas, and the August 28-September 7, 1995 Readiness Assessment for Receipt, Storage, and Shipment of SNM at Oak Ridge Y-12 Plant. In May 1995, two near term task reports in response to DNFSB Recommendation 94-4 (N1.2 and N3.1) identified the need for corrective actions in CSA/OSR compliance including improved understanding and strict compliance by the work force, and Conduct of Operations improvements such as increased management involvement in self assessments, and upgrading training and qualifications. The week prior to the review, CSA infractions were reported in room 26 of the 9212 facility, and a major effort was commenced by management to conduct walkdowns of the CSAs in Enriched Uranium Operations facilities. During this assessment, the team identified several CSA deficient conditions which are included in the Form 2 for the DUO area, Form 2: C-COO-2/DUO-1. The continuing CSA deficiencies, coupled with the currently inadequate continuing training program indicates that significant progress needs to be made before considering corrective actions effective. The Plan for Continuing and Resuming Operations, Y/AD-623, in October 1994 noted that rigor and strict compliance was fundamental. Experience at other sites has indicated that the best way to promote this improvement is to conduct robust continuing training at the floor level by the management, so that all the involved work force (operations and support) learn the background technical rationale, and hear the expectations of management that CSA program adherence must be fully effective, both operationally and technically.

## B. Documents reviewed, activities performed, persons contacted (include titles):

Discussions were conducted with Nuclear Operations Manager, the manager Nuclear Criticality Safety Division, and operations personnel in RSS and DUO facilities during the course of the assessment. Discussions were conducted with some mentors and engineers conducting walk-downs of CSAs in EUO areas during the course of the assessment. Verbal reports were received from management with respect to the CSA incident in the 9212 facility.

## Assessment Form 2

Date: 11/7/95

Assessment Form 2 No.: C-COO-3-1

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Review Area: Corrective Action Effectiveness

Responsible Individual: D. B. Branch, Jr.

## Records reviewed included:

- Internal memo, J. Flynn to R. Roosa, Conduct of Operations Baseline Assessment, March 23, 1995.
- The August 28-September 7, 1995, Readiness Assessment for Receipt, Storage, and Shipment of Special Nuclear Material at Oak Ridge Y-12 Plant.
- Y/NO-00002, Corrective Action Plan for Y-12 Nuclear Criticality Safety Program, Criticality Safety Approvals and Operational Safety Requirements Supporting Receipt, Storage, and Shipment of Special Nuclear Materials
- Y/NO-00003, Status of Conduct of Operations Program in Response to DNFSB Recommendation 94-4 (May 19, 1995).
- Y/DD-679, Preliminary Evaluation of the Y-12 Nuclear Criticality Safety Program, Criticality Safety Approvals, and Operational Safety Requirements Supporting Receipt, Storage, and Shipment of Special Nuclear Materials, April 26, 1995.
- Internal Report, Evaluation of Criticality Safety Discrepancy Data, October 12, 1994, which is Appendix A to Y/DD-679.
- Y/AD-623, Plan for Continuing and Resuming Operations, Oak Ridge Y-12 Plant, October 1994.
- February 1995 Implementation Plan for DNFSB Recommendation 94-4 Deficiencies in Criticality Safety at the Oak Ridge Y-12 Plant.
- Y/AD-622, Type C Investigation of the Y-12 Plant Criticality Safety Approval Infractions Event at Building 9204-2E on September 22, 1994.
- Y/AD-630, LMES, Inc. Readiness Assessment Report for the Resumption of Receipt, Storage, and Shipment of Special Nuclear Material at the Oak Ridge Y-12 Plant, August 18, 1995.
- Readiness Assessment for Receipt, Storage and Shipment of Special Nuclear Material at the Oak Ridge Y-12 Plant, Volumes I and II, August 28-September 7, 1995.

Assessment Form 2

Date: 11/7/95

Assessment Form 2 No.: C-COO-3-1  
Review Area: Corrective Action Effectiveness  
Responsible Individual: D. B. Branch, Jr.

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III. Approval Section (Signatures)

Originator  Date 11/9/95

Approved  Date 11/9/95

Suggested Corrective Action:

As part of Corrective Action Planning following this assessment, carefully evaluate the significance of this deficient area so that sufficient resources are allocated to adequately correct CSA deficiencies. Robust continuing training is recommended which places emphasis on the technical bases supporting CSAs, and the reasons why strict adherence both operationally, and in technical support areas, is fundamental. This needs to be taught to engineers and personnel conducting walkdowns, assessments, and audits, in addition to operators. It is recommended that sufficiently qualified senior personnel take a leadership role in improving this area because of its fundamental importance to safe operations. Similarly, all operators should receive more in-depth training in their FSARs and OSRs since they need to learn the accident scenarios, and what maintenance or operations are a threat to the Authorization Basis. Experience at other sites has shown that once the Operations Managers, Shift Managers, STAs, and operations personnel doing hands on work thoroughly understand the OSRs, FSARs, and appropriate CSA safety analyses, adequate compliance is rapidly achieved. The STA, Shift Managers, and Operations Managers who are successful at other sites can demonstrate compliance with their OSRs and FSAR requirements, and can demonstrate that their surveillance requirements are technically adequate to satisfy the requirements of their FSAR/OSRs. This is because they have had in depth technical training in these areas, and the safety analysis details relative to CSAs effective in their area.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

**Assessment Form 1**

Date: 11/6/95

**Assessment Form 1 No.: C-COO-2/9720-5**page 1**Review Area: Conduct of Operations Implementation/Warehouse Building 9720-5****Responsible Individual: D. B. Branch, Jr.****I. Performance Objective: C-COO-2**

(List the Performance Objective number and description from the Assessment Program)

The quality level of implementation of DOE Order 5480.19 in facilities is adequate based on today's DOE-wide performance standards.

**II. Expectations:**

(Provide the expectations for the Performance Objective as stated in the Assessment Program)

Upon completion of Performance Objective C-COO-2, the Assessment Team should be able to determine the quality level of the implemented Conduct of Operations elements relative to benchmarked programs and to determine if:

- a. Ownership and understanding of Conduct of Operations requirements by the work force are adequate based on today's standards.
- b. Work is conducted according to Conduct of Operations requirements.

**III. Review Criteria:**

(Provide the criteria used for conducting the review.)

The quality level of implemented elements of DOE Order 5480.19 in facilities meets today's DOE-wide performance standards based on the Assessment Team's experience with Rocky Flats, Pantex, and Savannah River Conduct of Operations Program performance.

## Assessment Form 1

Date: 11/6/95

Assessment Form 1 No.: C-COO-2/9720-5

page 2

Review Area: Conduct of Operations Implementation/Warehouse Building 9720-5

Responsible Individual: D. B. Branch, Jr.

**IV. Approach:**

(List the procedures and documents reviewed, names and titles of personnel interviewed, references used, and evolutions observed.)

**Records Reviewed:**

Conduct of Operations implementation documentation  
Lockout-Tagout Procedure 70-527  
Replacement Lockout-Tagout Procedure IS-107  
August 28–September 7, 1995 Readiness Assessment for Receipt, Storage, and Shipment of Special Nuclear Materials at the Oak Ridge Y-12 Site.

**Interviews Conducted:**

Interviews were conducted with the Shift Manager, Facility Mentors, and five Material Clerks/Material Coordinators. Discussions with the Facility Operations Manager occurred frequently over the course of the visit. Also conducted were:

Tours of the facility  
Observation of shift briefing/plan of the day  
Observation of a material move  
Observation of a facility fire drill

**V. Discussion of Results with Basis:**

(Document the results of the review in sufficient detail using both the review criteria and the expectation statement as guidance.)

The review of the Conduct of Operations Implementation Status utilized the experience gained conducting similar reviews at Rocky Flats, Pantex and other facilities, and first-hand experience implementing Conduct of Operations in Rocky Flats nuclear facilities. During the review, recommendations were provided to the managers and workers based on that experience to help them continue to make improvements in their program. The process of using full time mentors, requiring hands-on activity by the Shift Manager and Operations Manager in day-to-day activities, and the significant training conducted in the last year have been successful in achieving a satisfactory level of disciplined attitude, and performance of work in the facility. The graded approach has been correctly applied. The Conduct of Operations administrative system is up-to-date and complete other than the periodic inspections of Lockout-Tagout, and the implementation quality is good. During interviews, tours, and observations on-the-floor, both workers and managers demonstrated excellent ownership and understanding of Conduct of Operations. The root causes of the September 1994 CSA incident were well understood by the workforce in Building 9720-5, and work is being undertaken according to Conduct of Operations requirements.

**VI. Conclusion:**

(Concluding statement based on the discussion of results. The statement should conclude whether the criteria of the objective was met.)

Conduct of Operations performance in Building 9720-5 is adequate. The criteria for Conduct of Operations implementation in Warehouse 9720-5 has been satisfied. (Form 2 C-COO-2/9720-5-2)

Assessment Form 1

Date: 11/6/95

Assessment Form 1 No.: C-COO-2/9720-5

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Review Area: Conduct of Operations Implementation/Warehouse Building 9720-5

Responsible Individual: D. B. Branch, Jr.

VII. Issues:

(List any issues identified as part of this review. All issues should also be documented on Assessment Form 2.)

There are two findings:

1. The Lockout-Tagout system in Building 9720-5 is not being periodically inspected as required by DOE Order 5480.19, Chapter IX.
2. Operator rounds do not inspect for correct placement of tags and locks as specified in DOE-STD-1030-92, Guide to Good Practices for Lockouts and Tagouts, Section 4.8

Originator

*D. B. Branch*

Date

*11/9/95*

Approved

*D. B. Branch*

Date

*11/9/95*

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-2/9720-5-1

page 1

Review Area: Lockout/Tagout Review-Warehouse Building 9720-5

Responsible Individual: D. B. Branch, Jr.

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

1. The Lockout/Tagout system in Building 9720-5 is not being periodically inspected as required by DOE Order 5480.19, Chapter IX.
2. Operator rounds in Building 9720-5 do not inspect for correct placement of tags and locks as specified in DOE-STD-1030-92, Guide to Good Practices for Lockouts and Tagouts, Section 4.8.

B. Information Requested

(List any information needed to further evaluate this item):

N/A



Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-2/9720-5-1

page 2

Review Area: Lockout/Tagout Review-Warehouse Building 9720-5

Responsible Individual: D. B. Branch, Jr.

**II. Basis Section**

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).

For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.

For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.

For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

**A. Description of Basis:**

DOE Order 5480.19 and the DOE Standard for Guide to Good Practices for Lockouts and Tagouts, DOE-STD-1030-92 specify minimum requirements for a lockout/tagout system. The DOE Order requires periodic inspections, and the standard delineates requirements when making rounds. Building management reported that no inspection had been accomplished in the past year, and interviews with workers in the facility indicated they do not check Lockout/Tagout as part of rounds in the facility. There were no inspections or audits indicated in the facility LO/TO Log which is customary at other DOE facilities.

**B. Documents reviewed, activities performed, persons contacted (include titles):**

**Records Reviewed:**

Lockout/Tagout Log for Building 9720-5  
Y-12 Procedure 70-527 (Lockout-Tagout)  
IS-107 (Lockout-Tagout Procedure under development to be implemented later in 1995)

**Interviews Conducted:**

Five certified Material Clerks and Material Coordinators:  
Building 9720-5 Shift Manager  
Discussion with Facility Operations Manager

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-2/9720-5-1

page 3

Review Area: Lockout/Tagout Review-Warehouse Building 9720-5

Responsible Individual: D. B. Branch, Jr.

III. Approval Section (Signatures)

Originator *D. B. Branch* Date 11/9/95

Approved *D. B. Branch* Date 11/9/95

Suggested Corrective Action:

The current plant procedure for Lockout-Tagout (Y-70-527) does not specify inspection requirements or requirements when making rounds. The replacement procedure being developed for implementation later in 1995 (IS-107) discusses periodic inspection but does not mandate periodicity. It is left to the Division/Organization Manager to specify. It is recommended that the new procedure specify a regular periodicity. Other DOE sites have typically specified that these inspections are to occur monthly.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-2/9720-5-2

page 1

Review Area: Conduct of Operations Implementation in 9720-5

Responsible Individual: D. B. Branch, Jr.

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

A review of the Conduct of Operations Implementation Status in the warehouse was conducted for the required elements of DOE Order 5480.19 except Lockout-Tagout which was separately reviewed. The level of quality in the facility is adequate based on today's DOE-wide performance standards.

B. Information Requested

(List any information needed to further evaluate this item):

N/A

## Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-2/9720-5-2

page 2

Review Area: Conduct of Operations Implementation in 9720-5

Responsible Individual: D. B. Branch, Jr.

**II. Basis Section**

**For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).**

**For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.**

**For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.**

**For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.**

**A. Description of Basis:**

The elements of DOE Order 5480.19 required to be implemented today were reviewed in the facility. The Nuclear Operations Conduct of Operations Manual, Appendix II includes the applicability rationale for the elements required in the facility. The graded approach has been correctly applied. The records supporting each element were complete and up-to-date. The Shift Manager and Operations Manager have a solid understanding of their responsibilities, and their administrative system for demonstrating compliance with the program is good. Evaluations of the implementation status and quality were compared to benchmarked programs. This evaluation was then compared with the Plant Management's self assessment of status conducted by mentors. These were consistent, indicating that self assessment standards accurately reflect facility status based on complex-wide expectations. During interviews, discussions with managers, tours, and observation of material transfer operations in the facility, the workers and managers demonstrated excellent ownership, and understanding of Conduct of Operations. All demonstrated clear understanding of the root cause of the September 1994 CSA incident, and the reasons for having undertaken resumption activities. Work observed was conducted according to Conduct of Operations requirements. Housekeeping in the facility was good.

**B. Documents reviewed, activities performed, persons contacted (include titles):**

Interviews were conducted with the Shift Manager, and with five Material Clerk/Material Facility Coordinators. Discussions with the Operations Manager occurred frequently over the course of the visit. Tours of the facility, and observation of a material move were conducted. Required chapters of the Nuclear Operations Conduct of Operations Manual and Appendix II, and supporting logs and records were reviewed. A shift briefing/plan of the day was attended. Facility mentors were interviewed.

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-2/9720-5-2  
Review Area: Conduct of Operations Implementation in 9720-5  
Responsible Individual: D. B. Branch, Jr.

page 3

III. Approval Section (Signatures)

Originator DalHoy Date 11/9/95

Approved DalHoy Date 11/9/95

Suggested Corrective Action:

During the course of interviews, operators indicated weakness in knowledge of the facility FSAR. It is recommended that training in FSAR accident scenarios, CSA bases, and other fundamentals be conducted by facility management regularly to improve the overall knowledge of facility personnel. It is recommended that the process undertaken to implement Conduct of Operations in this facility be repeated in follow-on facilities as the resumption program continues.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

**Assessment Form 1**

Date: 11/1/95

Assessment Form 1 No.: C-COO-1/DUO

page 1

Review Area: Conduct of Operations Program; DUO Buildings

Responsible Individual: J. Angelo

**I. Performance Objective: C-COO-1**

(List the Performance Objective number and description from the Assessment Program)

The requirements of DOE Order 5480.19 have been adequately planned for implementation and will be of a level of quality required by today's performance standards complex-wide.

**II. Expectations:**

(Provide the expectations for the Performance Objective as stated in the Assessment Program)

Upon completion of Performance Objective C-COO-1, the Assessment Team should be able to determine if:

- a. The Y-12 Plant Conduct of Operations Program as planned and being implemented will be sufficiently comprehensive.
- b. The Y-12 Program will have adequate resources and adequate management involvement.
- c. The Y-12 Program will meet today's DOE-wide standards for an adequate Conduct of Operations Program.

**III. Review Criteria:**

(Provide the criteria used for conducting the review.)

The Conduct of Operations Program at the Y-12 Plant meets today's quality level expected within the DOE-complex. The Program should promote adequate Conduct of Operations performance when implemented.

## Assessment Form 1

Date: 11/1/95

Assessment Form 1 No.: C-COO-1/DUO

page 2

Review Area: Conduct of Operations Program; DUO Buildings

Responsible Individual: J. Angelo

**IV. Approach:**

(List the procedures and documents reviewed, names and titles of personnel interviewed, references used, and evolutions observed.)

**Records Reviewed:**

Draft COO Manual  
Facility Safety Basis Documentation  
COO Implementation Plans  
Assessment Reports (internal and external)  
Facility Procedures and Supporting Administration

**Interviews Conducted:**

Deputy Nuclear Operations Manager  
DUO Manager  
DUO Casting Operations Manager  
DUO Resumption Manager  
Facility Management Mentor  
several line managers (9998, 9215, 9204-2E, and 9201-5N), and  
workers (9998, 9215, 9204-2E, and 9201-5N).

**Evolutions Observed:**

Shift Briefings  
Plan of the Day Meetings  
Use of Procedures for On-Line Qualification and Simulated Equipment Startup  
Operations Unit Manager Walkthroughs  
Operations Manager Walkthroughs

A CSA violation drill was also observed.

Assessment Form 1

Date: 11/1/95

Assessment Form 1 No.: C-COO-1/DUO

page 3

Review Area: Conduct of Operations Program; DUO Buildings

Responsible Individual: J. Angelo

V. Discussion of Results with Basis:

(Document the results of the review in sufficient detail using both the review criteria and the expectation statement as guidance.)

Organizationally, there is a need to accelerate the development of a Memorandum of Understanding which describes roles and responsibilities between the Operating Unit Managers and the Operations Managers. In 9998, it does not appear that DUO is adequately supported by the landlord-tenant relationship as evidenced by poor material conditions and substandard housekeeping. As roles and responsibilities are not well defined, some managers have not demonstrated adequate interest in Conduct of Operations in all parts of the facility. No overall coordinator for implementation of Conduct of Operations has been established.

Poor material conditions were identified and described in a separate finding. Poor maintenance practices also existed and included tools left adrift, flammables exposed, oil spills not cleaned-up, water leaks, trash, etc. Poor practices contributed to facility hazard. No maintenance procedures have been established to support operation of equipment in 9215/9204-2E and none are scheduled for development.

VI. Conclusion:

(Concluding statement based on the discussion of results. The statement should conclude whether the criteria of the objective was met.)

Adequate Conduct of Operations programs have been developed but need to be applied in all parts of the facility and for support organizations.

VII. Issues:

(List any issues identified as part of this review. All issues should also be documented on Assessment Form 2.)

A. Finding: There are no maintenance procedures in place or scheduled to be developed to support operations or equipment in 9215/9204-2E. (Form 2, C-COO-1/DUO-2)

B. Concern: Clear ownership has not been established in some facilities. (Form 2, C-COO-1/DUO-1)

Originator

*J. W. Angelo FOR*

Date

*11/9/95*

Approved

*Dalbony*

Date

*11/9/95*



## Assessment Form 2

Date: 10/31/95

Assessment Form 2 No.: C-COO-1/DUO-1  
Review Area: DUO Roles and Responsibilities  
Responsible Individual: J. Angelo

page 1

**Finding** -- A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** -- Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** -- Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** -- Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

**I. Identification Section****A. Statement**

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

**Concern:**

Clear ownership has not been established in some facilities.

**Background:**

Organizationally, there is a need to accelerate the development of an Memorandum of Understanding (MOU) which describes the roles and responsibilities between Operations Unit Managers and Operations Managers. In 9998, it does not appear that DUO is adequately supported by the landlord-tenant relationship as evidenced by poor material conditions and substandard housekeeping in equipment spaces, fan room, mezzanine, and rooftop areas.

The poor material conditions are described separately in a finding. Poor maintenance practices include tools left adrift, flammables exposed, oil spills not cleaned-up, water leaks, trash and debris, etc. All contribute to increased facility hazard. All must be treated as potential radioactive contaminated waste.

**B. Information Requested**

(List any information needed to further evaluate this item):

None.

Assessment Form 2

Date: 10/31/95

Assessment Form 2 No.: C-COO-1/DUO-1  
Review Area: DUO Roles and Responsibilities  
Responsible Individual: J. Angelo

page 2

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

DOE Order 5480.19, Chapter 1, 2, and 8

B. Documents reviewed, activities performed, persons contacted (include titles):

CONTACT: DUO Manager  
DUO Operations Unit Manager  
DUO Self-Assessment and Issues Manager

III. Approval Section (Signatures)

Originator DBBraf for  
J. W. Angelo

Date 11/9/95

Approved Dad/Young

Date 11/9/95

Suggested Corrective Action:

Complete development of the roles and responsibilities MOU and promulgate it to facility personnel.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_

Date \_\_\_\_\_

Assessment Form 2

Date: 11/2/95

Assessment Form 2 No.: C-COO-1/DUO-2  
Review Area: DUO Bldgs. 9215/9204-2E  
Responsible Individual: J. Angelo

page 1

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.  
**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.  
**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.  
**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

There are no maintenance procedures in place or scheduled to be developed to support operating equipment in 9215/9204-2E.

B. Information Requested

(List any information needed to further evaluate this item):

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

DOE Order 4330.4B, Conduct of Maintenance Requirements

B. Documents reviewed, activities performed, persons contacted (include titles):

Contacted DUO Managers, on-site engineering subcontractor, and the crew from the facility.

Assessment Form 2

Date: 11/2/95

Assessment Form 2 No.: C-COO-1/DUO-2  
Review Area: DUO Bldgs. 9215/9204-2E  
Responsible Individual: J. Angelo

page 2

III. Approval Section (Signatures)

Originator DBBMY for J. W. Angelo Date 11/9/95

Approved DakSany Date 11/9/95

Suggested Corrective Action:

Develop a layup maintenance program, and conduct an evaluation to determine which equipments should have maintenance procedures developed in time to support future operations.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

**Assessment Form 1**

Date: 11/4/95

Assessment Form 1 No.: C-COO-2/DUO  
Review Area: Conduct of Operations Implementation; DUO Buildings  
Responsible Individual: J. Angelo

page 1

**I. Performance Objective: C-COO-2**  
(List the Performance Objective number and description from the Assessment Program)

The quality level of implementation of DOE Order 5480.19 in facilities is adequate based on today's DOE-wide performance standards.

**II. Expectations:**  
(Provide the expectations for the Performance Objective as stated in the Assessment Program)

Upon completion of Performance Objective C-COO-2, the Assessment Team should be able to determine the quality level of the implemented Conduct of Operations elements relative to benchmarked programs and to determine if:

- a. Ownership and understanding of Conduct of Operations requirements by the work force are adequate based on today's standards.
- b. Work is conducted according to Conduct of Operations requirements.

**III. Review Criteria:**  
(Provide the criteria used for conducting the review.)

The quality level of implemented elements of DOE Order 5480.19 in facilities meets today's DOE-wide performance standards based on the Assessment Team's experience with Rocky Flats, Pantex, and Savannah River Conduct of Operations Program performance.

**Assessment Form 1**

**Date: 11/4/95**

**Assessment Form 1 No.: C-COO-2/DUO**

**page 2**

**Review Area: Conduct of Operations Implementation; DUO Buildings**

**Responsible Individual: J. Angelo**

**IV. Approach:**

*(List the procedures and documents reviewed, names and titles of personnel interviewed, references used, and evolutions observed.)*

**Records Reviewed:**

Configuration Control System Lineups  
USQDs  
FSAR

**Interviews Conducted:**

LO-TO Manager  
Operations Manager  
3 Operations Unit Managers

**Evolutions Observed:**

Morning Shift Brief  
Daily Checks  
Operator Rounds  
Material Inspection  
POD  
LO-TO Log and Audit Review

**Maintenance Activity**

Casting Furnace Startup Procedure Walkthrough (used Performance Documentation Checklist and Startup Procedure)

Operator Checkout on Casting Furnace Startup (used Performance Documentation Checklist)

**RADCON Practices**

Abnormal Situation Response (CSA Violation)

## Assessment Form 1

Date: 11/4/95

Assessment Form 1 No.: C-COO-2/DUO

page 3

Review Area: Conduct of Operations Implementation; DUO Buildings

Responsible Individual: J. Angelo

**V. Discussion of Results with Basis:**

(Document the results of the review in sufficient detail using both the review criteria and the expectation statement as guidance.)

The review of the Conduct of Operations Implementation Status utilized the experience gained observing operations at various DOE facilities and first hand experience implementing Conduct of Operations at Pantex nuclear facilities. During the review, recommendations were provided to the managers and workers based on that experience to assist them in making improvements in their program.

The process of using full-time mentors, requiring hands-on activity by the Shift Manager, Operations Manager, and Production Manager in day-to-day activities, and the significant training conducted in the last year have been successful in achieving an adequate level of disciplined attitude and performance of work in DUO Operations. The mentor program has been concentrated on assessments rather than teaching.

During interviews and observations on the floor, both workers and managers demonstrated positive attitude toward and understanding of formal Conduct of Operations.

Three potential CSA violations were found in 9201-5, third floor laydown area. While determining that these three concerns were not actual CSA technical concerns, an additional potential CSA violation was discovered by the accountable manager. None of these administrative CSA violations constituted violation of the double contingency safety envelope.

Contributing causes to these potential violations:

1. Accountability for CSAs has been assigned to managers who do not necessarily understand the technical issues involved. These managers accept custody of the arrays and assume that NCS D has provided certification that the CSAs are and will remain perfect.
2. NCS D assumes no ownership responsibilities for CSAs. They appear to view themselves as service providers who come when called. NCS D conducts no routine surveillances of CSAs. Despite the requirement to implement administrative controls, CSAs are not treated as LOCs.
3. Managers assume that round-takers will detect problems with CSAs or that housekeeping surveys will detect problems.
4. The technical basis for CSAs are not an integral part of the CSAs. While the rigorous numerical analysis would add no value to the CSA, an executive summary of the bases would.
5. NCS D personnel conducted their actions from an expert-based mentality. They need to adapt a standards-based form of thinking.
6. The double contingency and defense in-depth concept may be over-conservative. As a result, CSAs exist where criticality could not occur even if a container were completely filled with a moderator. This results in loss of sensitivity to real criticality concerns.

## Assessment Form 1

Date: 11/4/95

Assessment Form 1 No.: C-COO-2/DUO

page 4

Review Area: Conduct of Operations Implementation; DUO Buildings

Responsible Individual: J. Angelo

7. Processes to eliminate fissile waste have not been given high enough restart priority. As a result, there has been a nearly unmanageable buildup of inventory.
8. Over the years, managers have not been required to maintain high standards of cleanliness, especially at storage sites. Standards in the facility where the CSA concerns were identified are unacceptable.
9. Roles and responsibilities are not well defined for tenant/landlord relationships. As a result, the facility safety envelope is never clearly bounded. In this case, EUO acknowledged ownership of the CSAs, but not the contractor laydown area. DUO also did not accept ownership of the laydown area. Apparently no one has accepted ownership of this area; neither DUO nor EUO know. Neither organization accepted responsibility to direct cleanup efforts of the laydown area, improperly labeled empty containers and empty RADCON boxes adrift in the area.
10. Inadequate funding is often quoted as the justification for existing conditions. Reallocation of existing resources should be considered.
11. Training to recognize CSA violations has been ineffective in that only a few personnel had called NCSO to report the drum overhang condition. NCSO personnel reported that they had received about three phone calls concerning the overhang over the past several months. DUO personnel assigned to the building indicated they had very little knowledge of the CSA requirements.

No production operations were observed. Complex operations were not conducted and simple operations were characterized by delays and inadequate procedures.

Evaluations of the implementation status and quality were compared with the Plant Management's self assessment of status conducted by mentors. These evaluations were consistent, indicating that self-assessment standards accurately reflect facility status.

**VI. Conclusion:**

(Concluding statement based on the discussion of results. The statement should conclude whether the criteria of the objective was met.)

**Conduct of Operations performance in DUO is not well-developed, but is headed in the right direction. Lack of formalized roles and responsibilities makes effective Conduct of Operations implementation difficult.**

**Mentors need to start teaching first-line managers how to teach some of the fundamental elements of proper Conduct of Operations.**

**The current status of Conduct of Operations implementation in DUO needs continuing improvement with mentoring and management oversight to achieve the quality level expected in the DOE complex today.**



Assessment Form 1

Date: 11/4/95

Assessment Form 1 No.: C-COO-2/DUO

page 5

Review Area: Conduct of Operations Implementation; DUO Buildings

Responsible Individual: J. Angelo

VII. Issues:

(List any issues identified as part of this review. All issues should also be documented on Assessment Form 2.)

A. There are six findings:

1. Four potential CSA violations were found in 9201-5, third floor laydown area. (Form 2 C-000-2/DUO-1)
2. A number of Radiation Control deficiencies were noted. (Form 2 C-000-2/DUO-2)
3. Some electrical controller doors are not routinely fastened after maintenance. (Form 2 C-000-2/DUO-3)
4. Material conditions in the equipment spaces above 9998 and on the roof of 9998 were poor. (Form 2 C-000-2/DUO-4)
5. Daily round sheets were not reviewed weekly as required. (Form 2 C-000-2/DUO-5)
6. Housekeeping in 9201-5 had deteriorated to the point that personnel making rounds were insensitive to safety concerns. (Form 2 C-000-2/DUO-6)

B. There is one concern:

Many material deficiencies exist that indicate inadequate management attention. (Form 2 C-000-2/DUO-7)

C. There are four observations:

1. Procedures development and labeling. (Form 2 C-COO-2/DUO-8)
2. Casting furnace startup procedure. (Form 2 C-COO-2/DUO-9)
3. Ladder not available to verify no leakage from a legacy EUO line which runs through 9998. (Form 2 C-COO-2/DUO-10)
4. Review of Conduct of Operations Implementation Status in DUO facilities. (Form 2-C-COO-2/DUO-11)

Originator DBB/fo  
J. W. Angelo

Date 11/9/95

Approved Dickson

Date 11/9/95

## Assessment Form 2

Date: 11/3/95

Assessment Form 2 No.: C-COO-2/DUO-1  
 Review Area: Criticality Safety Approval Posting Review  
 Responsible Individual: J. Angelo

page 1

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.  
**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.  
**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.  
**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

## I. Identification Section

## A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

**Finding:**

While observing DUO rounds in 9201-5, three potential CSA violations were noted in a laydown area on the third floor. This area falls under the cognizance of EUO. While determining that these three concerns were not actual CSA technical concerns, an additional potential CSA violation was discovered by the accountable manager. None of these administrative CSA violations constituted violation of the double contingency safety envelope.

**Background:**

At about 0902, the person taking rounds had just completed taking required data in DUO operating areas. In transiting to the elevator, an Assessment Team observer noted drums inside an approved CSA across from the elevator which overhung the CSA boundary. All personnel moved at least 15 feet away from the array and NCSO was notified via a call to the PSS. DUO personnel responded and established a boundary by 0917. NCSO did not arrive until 0943. While waiting for NCSO to arrive, two adjacent CSA arrays were inspected, and two additional potential CSA violations were noted:

- (1) One or more drain holes were blocked by material inside the drums.
- (2) A large number of drums did not have drilled holes, but instead had rectangular-shaped holes punched near the bottom at irregular heights.

The 15-ft safe zone was established around the two additional arrays when NCSO personnel arrived.

**Relevant Facts**

- The CSAs in question are the responsibility of EUO.
- NCSO response took about 30 minutes from the time of initial notification.
- A document was presented at the scene (18 August memo from NCSO) which provided a technical evaluation that a boundary overhang was not a safety issue for this array. No technical basis was presented to support this position.
- The CSA requires that the drums be 55-gal drums with four 1" diameter drain holes, spaced equally apart, centers within 2" of the drum bottom.
- The CSA makes an allowance for older drums to be provided with punched holes of 1/2" nominal diameter, but does not modify the 4-hole requirement.
- Several drums were noted to contain holes as small as 1/4" by 1".
- Where small holes existed in punched drums, there were more than four holes.

## Assessment Form 2

Date: 11/3/95

Assessment Form 2 No.: C-COO-2/DUO-1

page 2

Review Area: Criticality Safety Approval Posting Review

Responsible Individual: J. Angelo

- Discussions with NCSO indicated that the 2" height requirement was a requirement for punched and drilled holes. An Assessment Team member then requested a verification that no drum contained punched holes in violation of the 2" requirement.
- The accountable manager later reported a 2" violation and actions were taken per NCSO direction.
- Subsequent technical review revealed that no violation of the double contingency safety envelope had occurred.
- Clear and formal lines of accountability for this region of 9201-A5 are being developed in a draft MOU.

**II. Basis Section**

**For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).**

**For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.**

**For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.**

**For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.**

**A. Description of Basis:**

CSA 9206-MISC-1 No. 17226

**B. Documents reviewed, activities performed, persons contacted (include titles):****Documents Reviewed:**

CSA 9206-Misc-1, No. 17226

**Interviews Conducted:**

Nuclear Criticality Safety Division (NCSO) Manager  
2 NCSO Engineers  
DUO Manager  
9206 Operations Manager

Assessment Form 2

Date: 11/3/95

Assessment Form 2 No.: C-COO-2/DUO-1  
Review Area: Criticality Safety Approval Posting Review  
Responsible Individual: J. Angelo

page 3

III. Approval Section (Signatures)

Originator DBB for J. W. Angelo Date 11/9/95

Approved Dall'Yon Date 11/9/95

Suggested Corrective Action:

Improve Training Effectiveness and Management Oversight of

- Responsibilities for proper array condition
- CSA compliance
- Facility ownership

Issue definitive guidance on owner-tenant roles and responsibilities.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

## Assessment Form 2

Date: 11/2/95

Assessment Form 2 No.: C-COO-2/DUO-2  
 Review Area: Radiological Controls Practices  
 Responsible Individual: J. Angelo

page 1

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

## I. Identification Section

## A. Statement

(Provide exact wording of the potential or final **Finding**, Concern, Observation or Noteworthy Practice):

A number of deficiencies were raised relative to RADCON practices in DUO facilities associated with contamination areas (CA) as noted below.

1. No survey map for the CA outside (north) of 9215 could be located.
2. Other contamination survey maps reviewed were not dated.
3. Surveys in 9201-5N were inconsistent in "counts-per-minute" (CPM) equivalence. For example, 300,000 CPM equated to .2 MR/HR or 1 MR/HR depending on the area.
4. The RWP for 9215 did not include information about or a survey of the CA outside (north) of the building. This area must be accessed by the technician taking rounds.
5. Actions of Article 337 of the Y-12 RADCON Manual to control the spread of contamination are not being taken in the CA. Specifically:
  - solid barriers are not being used
  - air flow is not controlled
6. Vegetation is permitted in the outdoor CA. Dead leaves are free to transit boundaries.
7. Based on the presence of new and used laydown material in the CA, it is likely that contaminated and uncontaminated materials are not segregated as required. (Article 414.8, RADCON Manual)
8. Article 414.9, RADCON Manual "discourages" storage of radioactive material outside. This article appears to be bypassed by policy.
9. There is a potential that mixed waste is present in the outdoor CA. (forklift batteries?)

## B. Information Requested

(List any information needed to further evaluate this item):

Assessment Form 2

Date: 11/2/95

Assessment Form 2 No.: C-COO-2/DUO-2  
Review Area: Radiological Controls Practices  
Responsible Individual: J. Angelo

page 2

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

Y-12 Radiological Controls Manual

B. Documents reviewed, activities performed, persons contacted (include titles):

Documents Reviewed:

Radiological Controls Surveys, and RWP

Y-12 Radiological Controls Manual

Interviews Conducted:

LMES Radiological Controls Manager

DUO Self-Assessment and Issues Manager

Evolutions Observed:

Walkthrough of Rounds in 9215 and the outdoor CA

III. Approval Section (Signatures)

Originator DBB For J. W. Angelo Date 11/9/95

Approved DBB Date 11/9/95

Suggested Corrective Action:

Increase training and management attention on RADCON practices.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

Assessment Form 2

Date:

Assessment Form 2 No.: C-COO-2/DUO-3  
 Review Area: Material Conditions/Housekeeping Inspection in 9204-2E  
 Responsible Individual: J. Angelo

page 1

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.  
**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.  
**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.  
**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

**I. Identification Section**

**A. Statement**

(Provide exact wording of the potential or final **Finding, Concern, Observation or Noteworthy Practice**):

Some electrical controller doors are not routinely fastened after maintenance. Several fasteners are broken and not reported as deficient (see the high temperature salt bath controllers, for example)

**B. Information Requested**

(List any information needed to further evaluate this item):

**II. Basis Section**

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
 For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
 For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
 For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

**A. Description of Basis:**

OSHA 29 CFR 1910.303 (g)(2)

**B. Documents reviewed, activities performed, persons contacted (include titles):**

Self-Assessment and Issues Manager

Assessment Form 2

Date:

Assessment Form 2 No.: C-COO-2/DUO-3

page 2

Review Area: Material Conditions/Housekeeping Inspection in 9204-2E

Responsible Individual: J. Angelo

III. Approval Section (Signatures)

Originator J. W. Angelo *DBB of FR* Date 11/9/95

Approved *DBB* Date 11/9/95

Suggested Corrective Action:

- Improve effectiveness of training and management oversight of activities, panels are properly secured after use, and material deficiencies are reported and corrected.
- Fix the broken fasteners.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_



## Assessment Form 2

Date: 10/31/95

Assessment Form 2 No.: C-COO-2/DUO-4  
Review Area: DUO - Material/Housekeeping Conditions  
Responsible Individual: J. Angelo

page 1

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

**I. Identification Section****A. Statement**

(Provide exact wording of the potential or final **Finding**, Concern, Observation or Noteworthy Practice):

Material conditions in the equipment spaces in 9998 and on the roof of 9998 were poor. Examples are listed below:

- The 9998 H-1-3 stack is supported by three stays: One of the three stays is slack.
- A rubber boot on H-1-3 was ruptured, thereby bypassing the exhaust fan. Exhaust flow from affected areas was not evaluated.
- A cable-run conduit on the H-1-4 filter house had been pulled from its connection box, which exposed the conduit to rain. (Immediate Safety Hazard) (This item was promptly corrected.)
- No labels exist for the H-1-1 and H-1-3 controllers. Failure of these controllers would require facility evacuation.
- A ground fault had been silenced on a ventilation controller. (This item was promptly corrected.)

**B. Information Requested**

(List any information needed to further evaluate this item):

Assessment Form 2

Date: 10/31/95

Assessment Form 2 No.: C-COO-2/DUO-4  
Review Area: DUO - Material/Housekeeping Conditions  
Responsible Individual: J. Angelo

page 2

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

DOE Order 5480.19, Chapter 8

B. Documents reviewed, activities performed, persons contacted (include titles):

Resetting protection devices; DOE Order 5480.19, Chapter 2, and Alarm Status, Chapter 8, Control of Equipment and System Status. (Also - inspection tours of Chapter 2)

III. Approval Section (Signatures)

Originator J. W. Angelo *DBB* Date 11/9/95

Approved Daryl Bray Date 11/9/95

Suggested Corrective Action:

Increase supervision and oversight to improve effectiveness of housekeeping and material deficiency correction.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

Assessment Form 2

Date: 11/3/95

Assessment Form 2 No.: C-COO-2/DUO-5  
Review Area: Records Review in 9201-5  
Responsible Individual: J. Angelo

page 1

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.  
**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.  
**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.  
**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

Daily Round sheets had not been reviewed for the week by Operations Unit Manager. Additionally, the sheet contained writeovers.

B. Information Requested

(List any information needed to further evaluate this item):

None.

Assessment Form 2

Date: 11/3/95

Assessment Form 2 No.: C-COO-2/DUO-5  
Review Area: Records Review in 9201-5  
Responsible Individual: J. Angelo

page 2

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

CONOPS Manual/DOE Order 5480.19, Chapter II, Logkeeping

B. Documents reviewed, activities performed, persons contacted (include titles):

Records Reviewed:

Round Sheets  
Daily Rounds

Interviews Conducted:

DUO Self-Assessment and Issues Manager  
DUO 9204-4 Facility Manager

Evolutions Observed:

Daily Rounds

III. Approval Section (Signatures)

Originator DBB Boy For  
J. W. Angelo Date 11/9/95

Approved DBB Boy  
Date 11/9/95

Suggested Corrective Action:

Assessment Form 2

Date: 11/3/95

Assessment Form 2 No.: C-COO-2/DUO-5

page 3

Review Area: Records Review in 9201-5

Responsible Individual: J. Angelo

**IV. Contractor/DOE Response**

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_

Date \_\_\_\_\_

Assessment Form 2

Date: 11/3/95

Assessment Form 2 No.: C-COO-2/DUO-6

page 1

Review Area: Material/Housekeeping Conditions in 9201-5

Responsible Individual: J. Angelo

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final **Finding**, Concern, Observation or Noteworthy Practice):

Rounds were observed in 9201-5. A number of facility-related deficiencies were identified as noted below:

1. Lighting was poor in a number of areas.
2. A number of electrical cabinet doors and one fire damper were not properly secured.
3. The maintenance material related storage area in the third floor laydown area is unsatisfactorily stowed.

Condition of spaces has deteriorated to the point that people making rounds are insensitive to safety concerns.

B. Information Requested

(List any information needed to further evaluate this item):

Records Reviewed:

Round Sheet

Evolution Observed:

Facility Rounds in 9201-5

Assessment Form 2

Date: 11/3/95

Assessment Form 2 No.: C-COO-2/DUO-6  
Review Area: Material/Housekeeping Conditions in 9201-5  
Responsible Individual: J. Angelo

page 2

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

DOE Order 5480.19, Chapters 2 and 8

B. Documents reviewed, activities performed, persons contacted (include titles):

III. Approval Section (Signatures)

Originator DBB-17 For J. W. Angelo Date 11/9/95

Approved Dan B. Bay Date 11/9/95

Suggested Corrective Action:

Increase supervision and oversight to improve effectiveness of housekeeping and material deficiency correction.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

## Assessment Form 2

Date: 10/31/95

Assessment Form 2 No.: C-COO-2/DUO-7

page 1

Review Area: DUO/Foundry - Procedure Walkthrough Observation

Responsible Individual: J. Angelo

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

**I. Identification Section****A. Statement**

(Provide exact wording of the potential or final Finding, Concern Observation or Noteworthy Practice):

During a scheduled evolution, a number of material deficiencies indicative of inadequate management attention were raised:

- a. This was a walkthrough operation in which a number of pumps were simulated to be started. "As found" conditions revealed that the breaker for the roughing vacuum pump was closed while others were found open. There appears to be inconsistency in shutdown alignments.
- b. Demineralized water makeup hoses are jury-rigged to supply the fill makeup tanks. As a result, hoses are draped across electrical controllers, hoses are crimped by tank lids, and covers are partially off exposing the water tanks to foreign material contamination.
- c. General valve conditions, material conditions, and housekeeping were found to be in need of maintenance and management attention.

**B. Information Requested**

(List any information needed to further evaluate this item):

None.



Assessment Form 2

Date: 10/31/95

Assessment Form 2 No.: C-COO-2/DUO-7  
Review Area: DUO/Foundry - Procedure Walkthrough Observation  
Responsible Individual: J. Angelo

page 2

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

DOE Order 5480.19, Chapter 8

B. Documents reviewed, activities performed, persons contacted (include titles):

III. Approval Section (Signatures)

Originator DBB for J. W. Angelo Date 11/9/95

Approved Dan B Bray Date 11/9/95

Suggested Corrective Action:

- Increase supervision and oversight to improve effectiveness of housekeeping and material discrepancy correction.
- Review shutdown system alignment procedures.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

Assessment Form 2

Date: 11/3/95

Assessment Form 2 No.: C-COO-2/DUO-8  
Review Area: Procedure Development  
Responsible Individual: J. Angelo

page 1

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

The procedures development process and the labeling program are well coordinated and effective. This area is assessed at 40–50% complete towards administrative compliance. Overall, these two COO chapters are assessed at about 12% each, but a sound program foundation has been attached.

B. Information Requested

(List any information needed to further evaluate this item):

Assessment Form 2

Date: 11/3/95

Assessment Form 2 No.: C-COO-2/DUO-8  
Review Area: Procedure Development  
Responsible Individual: J. Angelo

page 2

**II. Basis Section**

**For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).**

**For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.**

**For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.**

**For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.**

**A. Description of Basis:**

DOE 5480.19, Chapter 8, 16, and 18.

**B. Documents reviewed, activities performed, persons contacted (include titles):**

**Records Reviewed:**

- Drawings
- Labels
- Draft Procedures

**Interviews Conducted:**

- DUO Self-Assessment and Issues Manager
- Technical Support Engineers
- Technicians

Assessment Form 2

Date: 11/3/95

Assessment Form 2 No.: C-COO-2/DUO-8

page 3

Review Area: Procedure Development

Responsible Individual: J. Angelo

III. Approval Section (Signatures)

Originator J. W. Angelo <sup>DBB</sup> <sub>FIR</sub> Date 11/9/95

Approved Dalbany Date 11/9/95

Suggested Corrective Action:

Complete administrative compliance and start now to train facility personnel in why these areas are important

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

Assessment Form 2

Date: 10/31/95

Assessment Form 2 No.: C-COO-2/DUO-9  
Review Area: DUO/Foundry Evolution  
Responsible Individual: J. Angelo

page 1

**Finding** -- A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.  
**Concern** -- Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.  
**Observation** -- Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.  
**Noteworthy Practices** -- Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

The casting furnace startup evolution was presented in a formal and professional manner. The documents were easy to read and follow. Technicians were interested, and they understood why they were formalizing operations.

One minor procedure comment: The procedure does not require a check of demineralized water tank level before pump start, and it does not specify acceptable range in the oil sight glass levels.

B. Information Requested

(List any information needed to further evaluate this item):

None.

Assessment Form 2

Date: 10/31/95

Assessment Form 2 No.: C-COO-2/DUO-9  
Review Area: DUO/Foundry Evolution  
Responsible Individual: J. Angelo

page 2

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

B. Documents reviewed, activities performed, persons contacted (include titles):

- TMS #14530 (provisional), operation of the 135,145 and 155 casting furnaces.
- Observed evolution pre-briefing followed by evolution involving procedure walkthrough of system lineup and startup operations on a casting furnace.
- Interviewed Operations Manager and Self-Assessment and Issues Manager

III. Approval Section (Signatures)

Originator DBBak FOR J. W. Angelo Date 11/9/95

Approved DulBoz Date 11/9/95

Suggested Corrective Action:

Correct procedure comments noted.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

Assessment Form 2

Date: 10/31/95

Assessment Form 2 No.: C-COO-2/DUO-10

page 1

Review Area: DUO/9998 Daily Rounds

Responsible Individual: J. Angelo

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

One technician was observed conducting his daily rounds. The individual had a good understanding of formality goals and he demonstrated good knowledge and technique during his rounds. Principles of logkeeping in DOE Order 5480.19, Chapter 11 were incorporated into this round sheet.

One deficiency was noted. A ladder is normally used to verify no leakage from a legacy EUO line which runs through 9998. This ladder was not available for this round.

B. Information Requested

(List any information needed to further evaluate this item):

None.

Assessment Form 2

Date: 10/31/95

Assessment Form 2 No.: C-COO-2/DUO-10

page 2

Review Area: DUO/9998 Daily Rounds

Responsible Individual: J. Angelo

**II. Basis Section**

**For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).**

**For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.**

**For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.**

**For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.**

**A. Description of Basis:**

DOE Order 5480.19, Chapter 2, Rounds

**B. Documents reviewed, activities performed, persons contacted (include titles):**

**Records Reviewed:**

9998 Round Sheets Reviewed.

**Interview Conducted:**

9998 Operations Unit Manager

**Evolutions Observed:**

Daily Rounds



Assessment Form 2

Date: 10/31/95

Assessment Form 2 No.: C-COO-2/DUO-10  
Review Area: DUO/9998 Daily Rounds  
Responsible Individual: J. Angelo

page 3

III. Approval Section (Signatures)

Originator J. W. Angelo *DBB For* Date 11/9/95

Approved *Dall'Hy* Date 11/9/95

Suggested Corrective Action:

A review of this round activity (check of the EUO line for leaks) should be conducted to determine its utility. The line in question traverses above the new salt bath, and it is doubtful that a good visual check of this pipe can ever be made.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

Assessment Form 2

Date: 11/2/95

Assessment Form 2 No.: C-COO-2/DUO-11  
 Review Area: COOP Implementation 9201-5N  
 Responsible Individual: J. Angelo

page 1

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.  
**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.  
**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.  
**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

A review of the Conduct of Operations Implementation Status in DUO facilities was conducted for the required elements of DOE Order 5480.19. The quantitative evaluations were substantially in agreement.

B. Information Requested

(List any information needed to further evaluate this item):

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
 For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
 For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
 For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

DOE Order 5480.19

B. Documents reviewed, activities performed, persons contacted (include titles):

Persons contacted:

DUO Self-Assessment and Issues Manager  
 9201-5N Operations Manager

Assessment Form 2

Date: 11/2/95

Assessment Form 2 No.: C-COO-2/DUO-11  
Review Area: COOP Implementation 9201-5N  
Responsible Individual: J. Angelo

page 2

III. Approval Section (Signatures)

Originator J. W. Angelo *DB Boy FOX*

Date 11/9/95

Approved *DB Boy*

Date 11/9/95

Suggested Corrective Action:

None

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

Accepted By: N/A

Date \_\_\_\_\_

## Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-3/DUO  
Review Area: DUO Corrective Actions Effectiveness  
Responsible Individual: J. Angelo

page 1

**I. Performance Objective: C-COO-3**

(List the Performance Objective number and description from the Assessment Program)

The corrective actions planned and accomplished by the contractor have been adequate and effective in addressing Conduct of Operations deficiencies.

**II. Expectations:**

(Provide the expectations for the Performance Objective as stated in the Assessment Program)

Upon completion of Performance Objective C-COO-3, the Assessment Team should be able to determine if:

- a. Conduct of Operations corrective actions taken and planned are adequate based on the root cause.
- b. Conduct of Operations corrective actions completed have been effective in improving work force performance.

**III. Review Criteria:**

(Provide the criteria used for conducting the review.)

The corrective actions taken to date have been adequate and have been effective in implementing positive change in the work force in Conduct of Operations.

**IV. Approach:**

(List the procedures and documents reviewed, names and titles of personnel interviewed, references used, and evolutions observed.)

**Records Reviewed:**

DUO Related Action Items from Y/NO-00002 and Y/NO-00003, the Criticality Safety Program and Conduct of Operations Posture Evaluations.

**Interviews Conducted:**

DUO Operations Manager  
DUO Operators

Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-3/DUO  
Review Area: DUO Corrective Actions Effectiveness  
Responsible Individual: J. Angelo

page 2

V. Discussion of Results with Basis:

(Document the results of the review in sufficient detail using both the review criteria and the expectation statement as guidance.)

Corrective Actions identified for DUO were captured in the LMES assessments of their Criticality Safety Program and CSA/OSRs and Conduct of Operations posture. Several action items were reviewed for appropriateness of corrective action and for effectiveness. The appropriateness and effectiveness of the corrective action were evaluated based on observation of activities, interviews with operators and management, and through record reviews for objective evidence of completion and lack of recurrence.

Less than half of the action items are assessed as appropriate and effective. Some plans have not been developed. Four action items are recommended for reopening because of a lack of objective evidence of completion or evidence that the deficient activity is continuing and the root cause has not been corrected.

The assessment confirmed that there is management attention to deficiencies and action items are being managed. Both of the assessments, for which the action plans were reviewed, occurred within the past six months. Therefore, there has been only a limited time in which to judge the effectiveness of some of the corrective actions.

VI. Conclusion:

(Concluding statement based on the discussion of results. The statement should conclude whether the criteria of the objective was met.)

The objective criteria of DUO Corrective Action has been met.

VII. Issues:

(List any issues identified as part of this review. All issues should also be documented on Assessment Form 2.)

Of the 15 action items reviewed: 5 were assessed as appropriate and effective, 4 have no plan and could not be evaluated, 5 were assessed as ineffective, 1 was unable to be evaluated due to low level of activity during the assessment period. Form 2 C-COO-3/DUO-1

Originator J. W. Angelo *DBBry For* Date 11/9/95

Approved *DBBry* Date 11/9/95

## Assessment Form 2

Date: 11/7/95

Assessment Form 2 No.: C-COO-3/DUO-1  
 Review Area: DUO Corrective Action Plan Effectiveness  
 Responsible Individual: J. Angelo

page 1

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.  
**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.  
**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.  
**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

## I. Identification Section

## A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

A review of the corrective action plans for LMES evaluation of the Criticality Safety Program and CSA/OSRs and Conduct of Operations Posture was conducted. The action items from the DOE Implementation Plan for DNFSB 94-4, Quarterly Report, Attachment C: Corrective Action Tracking of LMES Reports, Y/NO-00002 and 00003 which apply to DUO operations and their status are listed below:

Y/NO-0002

Lessons Learned 6-1: Reported complete 5/22/95.

Comment: DUO personnel interviewed (about 30) confirmed effective implementation.

Action 3-1: Planned closure date is to be determined.

Comment: No plan for implementation was available for review.

Action 3-5: Scheduled for 3/97.

Comment: Not Started.

Y/NO-0003

Action 3-5: Reported complete 5/25/95.

Comment: Objective evidence review of 16 procedures confirms effective implementation.

Action 3-6: Reported complete 9/29/95.

Comment: Objective evidence review of procedures confirms implementation. However, no surveillance procedures were presented for review.

Action 3-7: Reported complete 5/25/95.

Comment: Unable to evaluate in DUO. No verification and validation activities were scheduled.

Action 3-9: Reported complete 9/29/95.

Comment: CSA concerns noted in EUO areas of 9201-5 on 11/3/95 indicated that this action item should be reopened.

Action 3-10: Reported complete 9/29/95.

Comment: Objective evidence confirms effective implementation.

Action 3-12: Planned closure in 1/96.

Comment: Objective evidence indicates that a program is in place, but the program does not belong to managers. January 96 is acceptable only if mentors effectively teach this program to managers. The program appears to be expert-based, not standards-based.

## Assessment Form 2

Date: 11/7/95

Assessment Form 2 No.: C-COO-3/DUO-1

page 2

Review Area: DUO Corrective Action Plan Effectiveness

Responsible Individual: J. Angelo

Action 3-13:

Comment:

Reported complete 9/29/95

Not effective. Measures, if they exist, are not posted for all to see, and line managers do not "speak" to them when discussing progress.Action 3-14:

Comment:

Reported complete 9/29/95.

DUO mission restart is not well defined. Restart plans are submitted to DOE, but some floor facilities, equipment support, and manning levels will not support restart.Action 4-2:

Comment:

Planned closure is 12/95.

Hiring activity is complete.

Action 4-5:

Comment:

No planned date.

Not assessed.

Action 4-6:

Comment:

Planned closure is 3/97.

Not started.

Action 4-7:

Comment:

Planned closure in 1/96.

Objective evidence indicates that a program is in place, but does not belong to managers. January 96 is acceptable only if mentors effectively teach this program to managers.

## B. Information Requested

(List any information needed to further evaluate this item): None

Assessment Form 2

Date: 11/7/95

Assessment Form 2 No.: C-COO-3/DUO-1  
Review Area: DUO Corrective Action Plan Effectiveness  
Responsible Individual: J. Angelo

page 3

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

B. Documents reviewed, activities performed, persons contacted (include titles):

Documents Reviewed:

LMES Corrective Action Plans for Criticality Safety Program (Y/NO-0002) and Conduct of Operations (Y/NO-00003)

Persons Interviewed:

DUO Operations Manager  
DUO Operators

Activities Observed:

CSA Violation Procedures  
Area Tours  
CSA Walkdown

III. Approval Section (Signatures)

Originator DBB-N  
J. W. Angelo For Date 11/9/95

Approved DBB-N Date 11/9/95

Suggested Corrective Action:

- Reopen those areas indicating recurrence of deficient performance
- Complete action plan for those not yet complete

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_



## Assessment Form 1

Date: 11/6/95

Assessment Form 1 No.: C-COO-1/9204-2E  
Review Area: Conduct of Operations Program-9204-2E  
Responsible Individual: W. A. Condon

page 1

**I. Performance Objective: C-COO-1**

(List the Performance Objective number and description from the Assessment Program)

The requirements of DOE Order 5480.19 have been adequately planned for implementation and will be of a level of quality required by today's performance standards complex-wide.

**II. Expectations:**

(Provide the expectations for the Performance Objective as stated in the Assessment Program)

Upon completion of Performance Objective C-COO-1, the Assessment Team should be able to determine if:

- a. The Y-12 Plant Conduct of Operations Program as planned and being implemented will be sufficiently comprehensive.
- b. The Y-12 Program will have adequate resources and adequate management involvement.
- c. The Y-12 Program will meet today's DOE-wide standards for an adequate Conduct of Operations Program.

**III. Review Criteria:**

(Provide the criteria used for conducting the review.)

The Conduct of Operations Program at the Y-12 Plant meets today's quality level expected within the DOE-complex. The Program should promote adequate Conduct of Operations performance when implemented.

**Assessment Form 1**

Date: 11/6/95

Assessment Form 1 No.: C-COO-1/9204-2E  
Review Area: Conduct of Operations Program-9204-2E  
Responsible Individual: W. A. Condon

page 2

**IV. Approach:**

(List the procedures and documents reviewed, names and titles of personnel interviewed, references used, and evolutions observed.)

**Records Reviewed:**

Criticality Safety Approvals  
DOE Monthly Reports  
9204-2E Self Assessments  
Nuclear Criticality Safety Deficiency Report  
Drill Guides  
9204-2E Shift Manager/PSS Turnover Sheet  
Building 9204-2E Disassembly and Assembly Operations Shift Manager/Shift Supervisor Briefing Checklist  
Program Elements of Conduct of Operations Program (e.g., Operator Aides, Status Files, Standing Orders, etc.)  
Memorandum from R. Roosa dated June 8, 1995, Mentor Program Description for Y-12 Resumption

**Interviews Conducted:**

Operations Manager  
Shift Supervisor  
Facility Manager  
Criticality Representative  
9204-2E Mentor  
MC&A Representative  
STA  
First Line Supervisor  
Disassembly and Special Operations Operator  
Assembly Person

**Evolutions Observed:**

Discovery of an Actual CSA Violation  
CSA Violation Drill  
Validation of CSA B2E-12  
Plan of the Day Meetings  
Mentor Self Assessment

## Assessment Form 1

Date: 11/6/95

Assessment Form 1 No.: C-COO-1/9204-2E  
 Review Area: Conduct of Operations Program-9204-2E  
 Responsible Individual: W. A. Condon

page 3

## V. Discussion of Results with Basis:

(Document the results of the review in sufficient detail using both the review criteria and the expectation statement as guidance.)

RFA MMES/Y-12-DOE-5480.19-CSA-160 was submitted to DOE on October 13, 1995. In the RFA, the 9204-2E facility committed to establish programs for the following Conduct of Operations Chapters by October 31, 1995.

<u>Chapter</u>	<u>Subject</u>
1	Organization and Administrative
2.2	Shift Operating Practices
8	Control of Equipment and System Status
14	Required Reading
15	Timely Orders to Operators
16	Operator Procedures
17	Operator Aid Posting

The facility has determined that the following chapters do not apply to the facility:

<u>Chapter</u>	<u>Subject</u>
2.1	Round Sheet Preparation and Use
3	Control Area Activities
13	Operational Aspects of Facility Chemistry and Unique Processes

Adequate programs exist for the seven chapters of the Conduct of Operations which have been identified for implementation by October 31, 1995. No issues were identified for these chapters.

Two issues were identified against the chapters which were determined to be not applicable to 9204-2E. First, DOE Standard 1037-93 defines a unique process as "a separate process that is not directly controlled by operations personnel, but can affect, or be affected by, an operator's activities." Clearly, activities such as securing electrical power or fire service to the facility meets this definition.

Second, the use of an established control area provides a focal point of safe and efficient facility operations. A control area provides a central operating base and coordination point for important facility activities. A control area should be considered for areas such as x-ray facilities, critical component welding machines, and laser operations where failure or improper controls could result in significant equipment damage or loss of life.

Assessment Form 1

Date: 11/6/95

Assessment Form 1 No.: C-COO-1/9204-2E  
Review Area: Conduct of Operations Program-9204-2E  
Responsible Individual: W. A. Condon

page 4

VI. Conclusion:

(Concluding statement based on the discussion of results. The statement should conclude whether the criteria of the objective was met.)

Adequate programs have been established for the identified chapters of Conduct of Operations. However, the facility should consider requiring implementation of Chapters 3 and 13 which have previously been determined to be not applicable to the facility.

VII. Issues:

(List any issues identified as part of this review. All issues should also be documented on Assessment Form 2.)

Concern: LMES should review Chapters 3 and 13 for applicability to 9204-2E. See Form 2 C-COO-1/9204-2E-1.

Originator

W A Condon

Date

11/8/95

Approved

D. B. Gray

Date

11/9/95

Assessment Form 2

Date: 11/1/95

Assessment Form 2 No.: C-COO-1/9204-2E-1  
 Review Area: COO Implementation Plan RFA-19-CSA-160  
 Responsible Individual: J. Angelo

page 1

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.  
**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.  
**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.  
**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

RFA-19-CSA-160 was submitted to DOE for approval on 13 October 1995. This RFA lists Chapters 3 and 13 as N/A for the site, which should be reconsidered as discussed below:

- DOE Standard 1037-93 of June 93 very clearly provides examples of "unique processes" that would be applicable to Y-12. (For example, the impact of securing steam or electrical power to a portion of nuclear operations facilities would have potentially significant consequences).
- Areas that should be considered for inclusion into the category of "Control Area Activity" would be control of x-ray facilities, critical component welding machines, and laser operations where failure to control adequately could cause significant equipment damage or loss of life.

B. Information Requested

(List any information needed to further evaluate this item):

None.

Assessment Form 2

Date: 11/1/95

Assessment Form 2 No.: C-COO-1/9204-2E-1  
Review Area: COO Implementation Plan RFA-19-CSA-160  
Responsible Individual: J. Angelo

page 2

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

- DOE STD 1037-93

B. Documents reviewed, activities performed, persons contacted (include titles):

Records Reviewed:

- DOE Order 5480.19, Chapters 3 and 13
- RFA-19-CSA-160
- DOE STD 1037-93

Interviews Conducted:

- Facility Mentor

III. Approval Section (Signatures)

Originator DBB for J. W. Angelo Date 11/9/95

Approved DBB Date 11/9/95

Suggested Corrective Action:

Conduct a review of unique processes and control area activities for 9204-2E against the DOE standard requirements.

Assessment Form 2

Date: 11/1/95

Assessment Form 2 No.: C-COO-1/9204-2E-1  
Review Area: COO Implementation Plan RFA-19-CSA-160  
Responsible Individual: J. Angelo

page 3

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

**Assessment Form 1**

Date: 11/6/95

Assessment Form 1 No.: C-COO-2/9204-2E

page 1

Review Area: Conduct of Operations Implementation 9204-2E

Responsible Individual: W. A. Condon

**I. Performance Objective: C-COO-2**

(List the Performance Objective number and description from the Assessment Program)

The quality level of implementation of DOE Order 5480.19 in facilities is adequate based on today's DOE-wide performance standards.

**II. Expectations:**

(Provide the expectations for the Performance Objective as stated in the Assessment Program)

Upon completion of Performance Objective C-COO-2, the Assessment Team should be able to determine the quality level of the implemented Conduct of Operations elements relative to benchmarked programs and to determine if:

- a. Ownership and understanding of Conduct of Operations requirements by the work force are adequate based on today's standards.
- b. Work is conducted according to Conduct of Operations requirements.

**III. Review Criteria:**

(Provide the criteria used for conducting the review.)

The quality level of implemented elements of DOE Order 5480.19 in facilities meets today's DOE-wide performance standards based on the Assessment Team's experience with Rocky Flats, Pantex, and Savannah River Conduct of Operations Program performance.



## Assessment Form 1

Date: 11/6/95

Assessment Form 1 No.: C-COO-2/9204-2E

page 2

Review Area: Conduct of Operations Implementation 9204-2E

Responsible Individual: W. A. Condon

## IV. Approach:

(List the procedures and documents reviewed, names and titles of personnel interviewed, references used, and evolutions observed.)

## Records Reviewed:

Criticality Safety Approvals

DOE Monthly Reports

9204-2E Self Assessments

Nuclear Criticality Safety Deficiency Report

Drill Guides

9204-2E Shift Manager/PSS Turnover Sheet

9204-2E Plan of the Day

Building 9204-2E Disassembly and Assembly Operations Shift Manager/Shift Supervisor Briefing Checklist

Program Elements of Conduct of Operations Program (e.g., Operator Aides, Status Files, Standing Orders, etc.)

Memorandum from R. Roosa dated June 8, 1995, Mentor Program Description for Y-12 Resumption

Memorandum from F. P. Gustavson to R. I. Spence, dated October 2, 1995, Deviation Request for Material Control and Accountability (MC&amp;A) Requirement (U)

Memorandum from J. C. Hall to V. H. Reis, dated October 17, 1995, Request for Approval of Exception to Material Control and Accountability Requirements for the Y-12 Plant

## Interviews Conducted:

Operations Manager

Shift Supervisor

Facility Manager

Criticality Representative

9204-2E Mentor

MC&amp;A Representative

STA

First Line Supervisor

Disassembly and Special Operations Operator

Assembly Person

## Evolutions Observed:

Shift Brief

Discovery of an Actual CSA Violation

CSA Violation Drill

Validation of CSA B2E-12

Plan of the Day Meetings

Mentor Self Assessment

## Assessment Form 1

Date: 11/6/95

Assessment Form 1 No.: C-COO-2/9204-2E

page 3

Review Area: Conduct of Operations Implementation 9204-2E

Responsible Individual: W. A. Condon

**V. Discussion of Results with Basis:**

(Document the results of the review in sufficient detail using both the review criteria and the expectation statement as guidance.)

During the assessment period, a CSA violation was discovered by a facility operator. The CSA violation consisted of a sealed bag of contaminated combustible material which was improperly stored and had crossed the boundary of the storage array. The operator immediately established a 15 foot perimeter and notified supervision. The Nuclear Criticality Safety Division (NCS D) was notified and NCS D personnel arrived on the scene within 10 minutes. The criticality engineer assessed the CSA violation and provided written guidance for corrective actions which were quickly implemented. This prompt corrective action was deemed noteworthy by the assessment team member.

Review of the plan of the day (POD) meeting for the 9204-2E facility indicated the meeting did not have an established goal. Activities to be added to the POD were reviewed to ensure they were required, however, activities already scheduled were allowed to continue past their scheduled completion date without accountability for cause. No procedure guidance existed to ensure the POD accomplished its intended purpose or was conducted in a consistent manner.

Upon shutdown of facility operations in September 1994, performance of Material Control and Accountability (MC&A) inventories could not be completed. This situation was recognized by the contractor who submitted a deviation request from the DOE MC&A order requirements. To date the deviation request has not been approved by DOE, however, the contractor implemented the compensatory measures identified within the deviation request. The MC&A inventory was scheduled for performance in September 1995 for the 9204-2E facility. Since 9204-2E has been given approval for resumption of RSS activities, procedures performed within the facility are required to meet established upgrade requirements. The inventory procedure has not been revised to comply with new procedure program requirements and could not be performed in the 9204-2E facility. As a result, no inventory has been completed since July 1995. This represents a failure of the contractor to comply with the documented compensatory measures submitted to DOE. Contractor personnel recognized the failure to comply with the compensatory measures in September 1995, but no corrective action has been completed to date. Management has not demonstrated the level of compliance with procedure requirements consistent with that expected by the Conduct of Operations Program.

A review of the Conduct of Operations implementation status in 9204-2E was conducted for the required elements of DOE Order 5480.19. The level of quality in the facility is adequate based on today's DOE-wide performance standards.

During interviews, tours, and observation of activities, facility personnel demonstrated ownership and understanding of Conduct of Operations. The cause of the 1994 Y-12 shutdown was well understood by facility personnel and increased sensitivity to compliance with documented requirements was demonstrated. Facility operators did demonstrate a weakness when questioned about FSAR and OSR requirements. Training should be provided on the basis for the FSAR, OSR, and CSA requirements to improve employee knowledge.

Assessment Form 1

Date: 11/6/95

Assessment Form 1 No.: C-COO-2/9204-2E  
 Review Area: Conduct of Operations Implementation 9204-2E  
 Responsible Individual: W. A. Condon

page 4

A review of the self assessment program for 9204-2E indicated a lack of management participation. Assessments are performed by assigned mentors and not by facility management. Significant effort has been devoted to the development of processes to implement the Conduct of Operations requirements. Assessments have been focused on how well the developed programs implement the programmatic requirements of 5480.19. Assessments do not attempt to measure personnel understanding and field compliance. The results of the self assessments are reviewed by facility management, but clear corrective actions are not developed, prioritized, and tracked for completion.

VI. Conclusion:

(Concluding statement based on the discussion of results. The statement should conclude whether the criteria of the objective was met.)

Implementation of the Conduct of Operations Program in 9204-2E is progressing. The facility self assessment indicates a 42% compliance with Conduct of Operations requirements and is consistent with the evaluation of the assessment team.

VII. Issues:

(List any issues identified as part of this review. All issues should also be documented on Assessment Form 2.)

- A. Noteworthy Practice: Response to CSA violation demonstrated understanding of CSA requirements and prompt corrective action. Form 2 C-COO-2/9204-2E-1.
- B. Concern: Plan of the day meetings are not consistent across the plant. Form 2 C-COO-2/9402-2E-2.
- C. Finding: Bi-monthly inventories have not been completed for 9204-2E since July 1995. Form 2 C-COO-2/9204-2E-3.
- D. Observation: Conduct of Operations Implementation Status. Form 2 C-COO-2/9204-2E-4
- E. Finding: Self assessment program for 9204-2E lacks management participation and is not performance based. Form 2 C-COO-2/9204-2E-5

Originator W.A. Condon Date 11/8/95  
 Approved DB Brox Date 11/9/95

## Assessment Form 2

Date: 10/31/95

Assessment Form 2 No.: C-COO-2/9204-2E-1

page 1

Review Area: Abnormal Event Response

Responsible Individual: W. A. Condon

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

## I. Identification Section

## A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

Noteworthy Accomplishment: Response to CSA violation by facility personnel demonstrated understanding of CSA requirements and prompt corrective action.

Background: At 08:10 a 9204-2E operator identified a CSA violation. The CSA violation consisted of a sealed bag of contaminated combustible material which was improperly stored and had crossed the boundary of the array in which it was stored. The operator immediately established a 15 foot perimeter and notified his supervision. The Nuclear Criticality Safety Division (NCS) was notified and NCS personnel arrived on the scene within 10 minutes. The criticality engineer assessed the CSA violation and provided written guidance for corrective actions which were quickly implemented.

Relevant Facts:

- CSA violation was detected by 9204-2E operator demonstrating knowledge of requirements at the "floor" level.
- Corrective actions were promptly identified and implemented.
- Response by NCS was timely and resulted in clear written guidance.

## B. Information Requested

(List any information needed to further evaluate this item):

CSA B2E-12

Assessment Form 2

Date: 10/31/95

Assessment Form 2 No.: C-COO-2/9204-2E-1

page 2

Review Area: Abnormal Event Response

Responsible Individual: W. A. Condon

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria). For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems. For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance. For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

The CSA violation was detected by a facility operator demonstrating good knowledge of CSA requirements. The corrective actions were identified and promptly implemented. Response by NCSD personnel was timely and resulted in clear written guidance.

B. Documents reviewed, activities performed, persons contacted (include titles):

Evolution Observed:

- Operator recognition and response.
• Response by NCSD personnel.

Persons contacted

- Facility manager
• Operations manager
• Shift manager
• Facility operator
• NCSD personnel

III. Approval Section (Signatures)

Originator [Signature] Date 11/8/95

Approved [Signature] Date 11/9/95

Suggested Corrective Action:

None

Assessment Form 2

Date: 10/31/95

Assessment Form 2 No.: C-COO-2/9204-2E-1

page 3

Review Area: Abnormal Event Response

Responsible Individual: W. A. Condon

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_

Date \_\_\_\_\_

Assessment Form 2

Date: 10/31/95

Assessment Form 2 No.: C-COO-2/9402-2E-2  
 Review Area: Plan of the Day Meeting Policy  
 Responsible Individual: W. A. Condon

page 1

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.  
**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.  
**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.  
**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern Observation or Noteworthy Practice):

Concern: Plan of the day (POD) meetings for 9204-2E did not have an established goal.

Background: Reviews of the POD meeting for the 9204-2E facility indicated the meeting did not have an established goal. Activities to be added to the POD were reviewed to ensure they were required. However, activities already scheduled were allowed to continue past their scheduled completion date without accountability for cause. No procedure guidance existed to ensure the POD accomplished its intended purpose or was conducted in a consistent manner.

B. Information Requested

(List any information needed to further evaluate this item):

None

Assessment Form 2

Date: 10/31/95

Assessment Form 2 No.: C-COO-2/9402-2E-2

page 2

Review Area: Plan of the Day Meeting Policy

Responsible Individual: W. A. Condon

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).

For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.

For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.

For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

POD meetings were not sufficiently structured to ensure proper scheduling and completion of work activities.

B. Documents reviewed, activities performed, persons contacted (include titles):

DOE Order 5480.19 and Conduct of Operations Manual, Chapter 15.

- 9402-2E POD

Persons

- Facility staff

III. Approval Section (Signatures)

Originator W.A. Condon Date 11/8/95

Approved DBB Date 11/9/95

Suggested Corrective Action:

Develop a plant procedure for how to conduct plan of the day.



Assessment Form 2

Date: 10/31/95

Assessment Form 2 No.: C-COO-2/9402-2E-2

page 3

Review Area: Plan of the Day Meeting Policy

Responsible Individual: W. A. Condon

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_

Date \_\_\_\_\_

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-2/9204-2E-3  
 Review Area: Bi-Monthly MC&A Inventories  
 Responsible Individual: W. A. Condon

page 1

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.  
**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.  
**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.  
**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final **Finding**, Concern, Observation or Noteworthy Practice):

**Finding:** Bi-monthly MC&A inventories have not been completed for 9204-2E since July 1995.

**Background:** Upon shutdown of facility operations in September 1994, performance of Material Control and Accountability (MC&A) inventories could not be completed. This situation was recognized by the contractor who submitted a deviation request from DOE MC&A order requirements. To date the deviation request has not been approved by DOE, however, the contractor implemented the compensatory measures identified within the deviation request. The MC&A inventory was scheduled for performance in September 1995 for the 9204-2E facility. Since 9204-2E has been given approval for resumption of RSS activities, procedures performed within the facility are required to meet established upgrade requirements. The inventory procedure has not been revised to comply with new procedure program requirements and could not be performed in the 9204-2E facility. As a result, no inventory has been completed since July 1995. This situation represents a failure of the contractor to comply with the documented compensatory measures submitted to DOE. Contractor personnel recognized the failure to comply with the compensatory measures in September 1995, but no corrective action has been completed to date. Management has not demonstrated the level of compliance with procedure requirements consistent with that expected by the Conduct of Operations Program.

B. Information Requested

(List any information needed to further evaluate this item):

None

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-2/9204-2E-3

page 2

Review Area: Bi-Monthly MC&A Inventories

Responsible Individual: W. A. Condon

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).

For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.

For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.

For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

MC&A inventories failed to meet documented site requirements.

B. Documents reviewed, activities performed, persons contacted (include titles):

Memorandum from F. P. Gustavson to R. J. Spence, dated October 2, 1995, Deviation Request for Material Control and Accountability (MC&A) Requirements (U)

Memorandum from J. C. Hall to V. H. Reis, dated October 17, 1995, Request for Approval of Exception to Materials Control and Accountability Requirements for the Y-12 Plant (Deviation Request No. OSS-OR-95-001) (U)

Persons

MC&A personnel  
 Facility personnel  
 DOE Facility Representative

III. Approval Section (Signatures)

Originator W.A. Condon Date 11/8/95

Approved DB Boy Date 11/9/95

Suggested Corrective Action:

- Performance of MC&A inventory as required by site program.
- Sensitize management to importance of compliance with documented requirements.

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-2/9204-2E-3

page 3

Review Area: Bi-Monthly MC&A Inventories

Responsible Individual: W: A. Condon

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_

Date \_\_\_\_\_

Assessment Form 2

Date: 11/7/95

Assessment Form 2 No.: C-COO-2/9204-2E-4

page 1

Review Area: Conduct of Operations Implementation in 9204-2E

Responsible Individual: W. A. Condon

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

Observation: A review of the Conduct of Operations Implementation status in 9204-2E was conducted for the required elements of DOE Order 5480.19 except lockout-tagout which was separately reviewed. The level of quality in the facility is adequate based on today's DOE-wide performance standards.

B. Information Requested

(List any information needed to further evaluate this item):

N/A

## Assessment Form 2

Date: 11/7/95

Assessment Form 2 No.: C-COO-2/9204-2E-4

page 2

Review Area: Conduct of Operations Implementation in 9204-2E

Responsible Individual: W. A. Condon

## II. Basis Section

**For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).**

**For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.**

**For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.**

**For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.**

## A. Description of Basis:

The elements of DOE Order 5480.19 were reviewed in the facility. Records supporting the elements were complete and up to date. The operations and shift manager have a solid understanding of their responsibilities, and the administrative system for demonstrating compliance with the program is good. Evaluations of the implementation status were compared to benchmarked programs and compared with facility assessments completed by assigned mentors. The comparison indicated the facility had accurately evaluated actual facility status against complex-wide expectations.

## B. Documents reviewed, activities performed, persons contacted (include titles):

## Records Reviewed:

Criticality Safety Approvals

DOE Monthly Reports

9204-2E Self Assessments

Nuclear Criticality Safety Deficiency Report

Drill Guides

9204-2E Shift Manager/PSS Turnover Sheet

Building 9204-2E Disassembly and Assembly Operations Shift Manager/Shift Supervisor

Briefing Checklist

Program Elements of Conduct of Operations Program (e.g., Operator Aides, Status Files, Standing Orders, etc.)

Memorandum from R. Roosa dated June 8, 1995, Mentor Program Description for Y-12 Resumption

Memorandum from F. P. Gustavson to R. I. Spence, dated October 2, 1995, Deviation Request for Material Control and Accountability (MC&amp;A) Requirement (U)

Memorandum from J. C. Hall to V. H. Reis, dated October 17, 1995, Request for Approval of Exception to Material Control and Accountability Requirements for the Y-12 Plant

Assessment Form 2

Date: 11/7/95

Assessment Form 2 No.: C-COO-2/9204-2E-4

page 3

Review Area: Conduct of Operations Implementation in 9204-2E

Responsible Individual: W. A. Condon

Interviews Conducted:

- Operations Manager
- Shift Supervisor
- Facility Manager
- Criticality Representative
- 9204-2E Mentor
- MC&A Representative
- STA
- First Line Supervisor
- Disassembly and Special Operations Operator
- Assembly Person

III. Approval Section (Signatures)

Originator W.A. Condon Date 11/8/95

Approved DB Bray Date 11/9/95

Suggested Corrective Action:

During facility interviews, operators and first line supervisors indicated a weakness in FSAR and OSR knowledge. Training of FSAR, OSR, and CSA basis should be conducted to improve overall knowledge of facility personnel.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

Accepted By: N/A Date \_\_\_\_\_

## Assessment Form 2

Date: 11/1/95

Assessment Form 2 No.: C-COO-2/9204-2E-5

page 1

Review Area: Self Assessment Program

Responsible Individual: W. A. Condon

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

## I. Identification Section

## A. Statement

(Provide exact wording of the potential or final **Finding**, Concern, Observation or Noteworthy Practice):

**Finding:** Self assessment program in 9204-2E lacks management participation and is not performance based.

**Background:** Self assessments in 9204-2E are performed by assigned mentors who have been chartered to perform three functions: (1) staff support, (2) performance of assessments, and (3) compensatory measures to support areas where conduct of operations standards are immature. Significant effort has been devoted to development of programs to implement conduct of operations requirements. To date, self assessments have been focused on how well these procedures meet the intent of DOE Order 5480.19 requirements. Assessments do not attempt to measure personnel understanding and field compliance.

Facility management does not participate in the self assessment process. This problem has been recognized and a management assessment process is under development. Results of self assessments are reviewed by facility management. However, corrective actions are not developed, prioritized, and tracked for completion.

## B. Information Requested

(List any information needed to further evaluate this item):

On-going assessments results



Assessment Form 2

Date: 11/1/95

Assessment Form 2 No.: C-COO-2/9204-2E-5

page 2

Review Area: Self Assessment Program

Responsible Individual: W. A. Condon

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).

For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.

For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.

For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

- DOE Order 5480.19, Chapter 1
- Nuclear Operations Conduct of Operations Manual, Chapter 1
- Y-60-028, Y-12 Plant Management Assessment Program

B. Documents reviewed, activities performed, persons contacted (include titles):

- Memorandum from R. K. Roosa, dated 6/8/95, Mentor Program Description for Y-12 Resumption
- Completed Assessments for 9402-2E.

III. Approval Section (Signatures)

Originator WA Condon Date 11/8/95

Approved DB Bray Date 11/9/95

Suggested Corrective Action:

Implement performance based self-assessments including direct involvement by organization management.

Assessment Form 2

Date: 11/1/95

Assessment Form 2 No.: C-COO-2/9204-2E-5

page 3

Review Area: Self Assessment Program

Responsible Individual: W: A. Condon

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_

Date \_\_\_\_\_

## Assessment Form 1

Date: 11/6/95

Assessment Form 1 No.: C-COO-3/9204-2E  
Review Area: Corrective Actions Effectiveness  
Responsible Individual: W. A. Condon

page 1

**I. Performance Objective: C-COO-3**

(List the Performance Objective number and description from the Assessment Program)

The corrective actions planned and accomplished by the contractor have been adequate and effective in addressing Conduct of Operations deficiencies.

**II. Expectations:**

(Provide the expectations for the Performance Objective as stated in the Assessment Program)

Upon completion of Performance Objective C-COO-3, the Assessment Team should be able to determine if:

- a. Conduct of Operations corrective actions taken and planned are adequate based on the root cause.
- b. Conduct of Operations corrective actions completed have been effective in improving work force performance.

**III. Review Criteria:**

(Provide the criteria used for conducting the review.)

The corrective actions taken to date have been adequate and have been effective in implementing positive change in the work force in Conduct of Operations.

## Assessment Form 1

Date: 11/6/95

Assessment Form 1 No.: C-COO-3/9204-2E  
Review Area: Corrective Actions Effectiveness  
Responsible Individual: W. A. Condon

page 2

**IV. Approach:**

(List the procedures and documents reviewed, names and titles of personnel interviewed, references used, and evolutions observed.)

**Records Reviewed:**

Criticality Safety Approvals  
DOE Monthly Reports  
9204-2E Self Assessments  
Nuclear Criticality Safety Deficiency Report  
Drill Guides  
9204-2E Shift Manager/PSS Turnover Sheet  
Building 9204-2E Disassembly and Assembly Operations Shift Manager/Shift Supervisor Briefing Checklist  
Program Elements of Conduct of Operations Program (e.g., Operator Aides, Status Files, Standing Orders, etc.)  
Memorandum from R. Roosa dated June 8, 1995, Mentor Program Description for Y-12 Resumption  
DOE Order 5480.19, Chapter 1  
Nuclear Operations Conduct of Operation Manual, Chapter 1  
Y-60-028, Y-12 Plant Management Assessment Procedure

**Interviews Conducted:**

Operations Manager  
Shift Supervisor  
Facility Manager  
Criticality Representative  
9204-2E Mentor  
MC&A Representative  
STA  
First Line Supervisor  
Disassembly and Special Operations Operator  
Assembly Person

**Evolutions Observed:**

Shift Brief  
Discovery of an Actual CSA Violation  
CSA Violation Drill  
Validation of CSA B2E-12  
Plan of the Day Meetings  
Mentor Self Assessment

Assessment Form 1

Date: 11/6/95

Assessment Form 1 No.: C-COO-3/9204-2E  
 Review Area: Corrective Actions Effectiveness  
 Responsible Individual: W. A. Condon

page 3

V. Discussion of Results with Basis:

(Document the results of the review in sufficient detail using both the review criteria and the expectation statement as guidance.)

A review of documented corrective actions for the 9204-2E facility indicated that OSR, CSAs, and implementing procedures to support RSS mission have been completed. Supervision is aware of the program but weaknesses were identified in operator knowledge of OSR content and basis. Procedures conducted in the 9204-2E facility were revised for compliance with the upgraded requirements. Facility personnel were especially aware of this requirement and as a result had stopped performance of MC&A inventories.

VI. Conclusion:

(Concluding statement based on the discussion of results. The statement should conclude whether the criteria of the objective was met.)

Corrective actions are adequate.

VII. Issues:

(List any issues identified as part of this review. All issues should also be documented on Assessment Form 2.)

None

Originator W A Condon

Date 11/8/95

Approved DB Bray

Date 11/9/95

## Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-1/9204-4 QE  
Review Area: Conduct of Operations Program; 9204-4 QE  
Responsible Individual: G. Francis

page 1

**I. Performance Objective: C-COO-1**

(List the Performance Objective number and description from the Assessment Program)

The requirements of DOE Order 5480.19 have been adequately planned for implementation and will be of a level of quality required by today's performance standards complex-wide.

**II. Expectations:**

(Provide the expectations for the Performance Objective as stated in the Assessment Program)

Upon completion of Performance Objective C-COO-1, the Assessment Team should be able to determine if:

- a. The Y-12 Plant Conduct of Operations Program as planned and being implemented will be sufficiently comprehensive.
- b. The Y-12 Program will have adequate resources and adequate management involvement.
- c. The Y-12 Program will meet today's DOE-wide standards for an adequate Conduct of Operations Program.

**III. Review Criteria:**

(Provide the criteria used for conducting the review.)

The Conduct of Operations Program at the Y-12 Plant meets today's quality level expected within the DOE-complex. The Program should promote adequate Conduct of Operations performance when implemented.

## Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-1/9204-4 QE  
Review Area: Conduct of Operations Program; 9204-4 QE  
Responsible Individual: G. Francis

page 2

**IV. Approach:**

(List the procedures and documents reviewed, names and titles of personnel interviewed, references used, and evolutions observed.)

**Records Reviewed:**

- Conduct of Operations Manual
- Administrative Procedures

**Interviews Conducted:**

- Shift Manager
- STA
- Mentor

**Evolutions Observed:****V. Discussion of Results with Basis:**

(Document the results of the review in sufficient detail using both the review criteria and the expectation statement as guidance.)

The Conduct of Operations Program in Building 9204-4 has been effectively established through the Nuclear Operations Conduct of Operations Manual. Most elements of the manual have been identified as applicable to the RSS and Quality Evaluation activities in the building.

The reorganization and infrastructure of the building supports the program as described in the Conduct of Operations Manual.

The operations planned for the facility have sufficient staff to perform the tasks.

The use of mentors in support of the operations personnel has been effective in establishing the programmatic elements of Conduct of Operations.

Some requirements established for the building are being ignored by support organizations and should be addressed.

Many elements of Conduct of Operations need clarification on how specific buildings will implement these elements. Specific guidance on who, what, where and how each element will be implemented should be developed to complete the programmatic aspects of Conduct of Operations.

Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-1/9204-4 QE  
Review Area: Conduct of Operations Program; 9204-4 QE  
Responsible Individual: G. Francis

page 3

VI. Conclusion:

(Concluding statement based on the discussion of results. The statement should conclude whether the criteria of the objective was met.)

The Conduct of Operations Program criteria is partially met in that some processes and procedures have yet to be developed.

VII. Issues:

(List any issues identified as part of this review. All issues should also be documented on Assessment Form 2.)

Specific responsibilities and actions required to implement Conduct of Operations Manual chapter requirements in facilities have not been fully developed. Form 2 C-COO-1/9204-4 QE-1

Originator 

Date 11/8/95

Approved 

Date 11/9/95



## Assessment Form 2

Date: 11/2/95

Assessment Form 2 No.: C-COO-1/9204-4 QE-1  
Review Area: COOP Implementing Instructions 9204-04 QE  
Responsible Individual: G. Francis

page 1

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

**I. Identification Section****A. Statement**

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

Concern: Specific responsibilities and actions required to implement Conduct of Operations Manual chapter requirements in facilities have not been fully developed.

**B. Information Requested**

(List any information needed to further evaluate this item):

None

Assessment Form 2

Date: 11/2/95

Assessment Form 2 No.: C-COO-1/9204-4 QE-1  
 Review Area: COOP Implementing Instructions 9204-04 QE  
 Responsible Individual: G. Francis

page 2

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
 For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
 For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
 For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

Conduct of Operations Manual

B. Documents reviewed, activities performed, persons contacted (include titles):

Records Reviewed:

- CONOPs manual (incl. Appendix II Tab 3)
- Plan of the day
- Deficiency log/tracking system
- Required reading
- Operator aids
- Timely orders to operators
- System status
- Housekeeping

Interviews conducted:

9204-4 Operations Manager

III. Approval Section (Signatures)

Originator  Date 11/2/95

Approved  Date 11/9/95

Suggested Corrective Action:

Develop building specific guidance for the required sections of the Conduct of Operations Manual to clarify responsibilities and items to fully implement the manual.

Assessment Form 2

Date: 11/2/95

Assessment Form 2 No.: C-COO-1/9204-4 QE-1  
Review Area: COOP Implementing Instructions 9204-04 QE  
Responsible Individual: G. Francis

page 3

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

## Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-2/9204-4 QE

page 1

Review Area: Conduct of Operations Implementation; 9204-4 QE

Responsible Individual: G. Francis

**I. Performance Objective: C-COO-2**

(List the Performance Objective number and description from the Assessment Program)

The quality level of implementation of DOE Order 5480.19 in facilities is adequate based on today's DOE-wide performance standards.

**II. Expectations:**

(Provide the expectations for the Performance Objective as stated in the Assessment Program)

Upon completion of Performance Objective C-COO-2, the Assessment Team should be able to determine the quality level of the implemented Conduct of Operations elements relative to benchmarked programs and to determine if:

- a. Ownership and understanding of Conduct of Operations requirements by the work force are adequate based on today's standards.
- b. Work is conducted according to Conduct of Operations requirements.

**III. Review Criteria:**

(Provide the criteria used for conducting the review.)

The quality level of implemented elements of DOE Order 5480.19 in facilities meets today's DOE-wide performance standards based on the Assessment Team's experience with Rocky Flats, Pantex, and Savannah River Conduct of Operations Program performance.

**Assessment Form 1**

Date: 11/7/95

Assessment Form 1 No.: C-COO-2/9204-4 QE

page 2

Review Area: Conduct of Operations Implementation; 9204-4 QE

Responsible Individual: G. Francis

**IV. Approach:**

(List the procedures and documents reviewed, names and titles of personnel interviewed, references used, and evolutions observed.)

**Records Reviewed:**

- Operator aids
- Required reading
- Qualification program for STA
- Timely orders to operators
- Organization charts
- CAAs Surveillance Procedure (Y50-53-50-005)

**Interviews Conducted:**

- Mentor
- Shift manager
- Shift technical advisor
- Facility support manager
- 3 QE operators

**Evolutions Observed:**

- Material move
- Surveillance of criticality alarm and annunciating system
- Tour of facility for housekeeping
- Pre-shift briefs
- Pre-evolution briefs

## Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-2/9204-4 QE

page 3

Review Area: Conduct of Operations Implementation; 9204-4 QE

Responsible Individual: G. Francis

**V. Discussion of Results with Basis:**

(Document the results of the review in sufficient detail using both the review criteria and the expectation statement as guidance.)

The Conduct of Operations Implementation for RSS and QE in Building 9204-4 is proceeding satisfactorily. The mentors evaluation of implementations status completed in October 1995 compares favorably with the evaluation conducted by the team.

The evaluation of the Conduct of Operations touched on all elements of the DOE order. Most elements are identified as applicable to Building 9204-4. The two areas identified as not applicable to the building are the controlled area guidelines and the unique processes. The team did not evaluate performance in these areas but recommends that the site review all nuclear operations for the applicability of these chapters on their next self evaluations. Many operations in the DOE complex use these chapters to develop procedures for their facilities.

Activities observed during this evaluation were limited to one surveillance and one material transport activity. Interviews covered all levels of management and 3 of 7 operators in the QE division. Record review covered all areas of Conduct of Operations as well as authorization basis materials.

The material move had only minor deficiencies. The surveillance was conducted by Plant Support Services personnel and had more significant issues. The interviews revealed that Management was knowledgeable of the requirements and had effectively communicated their expectations to the operators. Operators demonstrated good level of knowledge in areas of root cause of the incident leading to the Conduct of Operations upgrade. The operators enthusiastically supported the improved procedures and requirements to understand their authorization basis. Some frustration was displayed when discussing the problems encountered this week in performing operations. Many delays were encountered when procedure requirements could not be precisely met.

One material deficiency existed that should be corrected as soon as possible in that it sends a signal about management's commitment to safety of the operators. The deficiency is a steam leak at the train dock at the southwest end of the building. The noise from the leak is deafening and the moisture in the vicinity of the dock is causing excessive corrosion. The leak has been in existence for several months. Management agrees with the teams appraisal and is taking action.

Housekeeping in the QE lab areas was good. There were areas in the building that have not been attended to and there is an excess of combustible material. Routine checks have not been effective in keeping some areas clear.

The one area that helped to implement the understanding of Conduct of Operations was the daily continuing training sessions held during the spring and summer of 1995. These sessions have been eliminated. The experience in the DOE complex indicates that without frequent and routine continuing training of operators and management on Conduct of Operations expectations the standards fall back. I recommend in the strongest possible manner that management reinstitute a continuing training program to ensure the culture change, that has started, continues.

Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-2/9204-4 QE  
Review Area: Conduct of Operations Implementation; 9204-4 QE  
Responsible Individual: G. Francis

page 4

VI. Conclusion:

(Concluding statement based on the discussion of results. The statement should conclude whether the criteria of the objective was met.)

The Conduct of Operations Implementations criteria was met.

VII. Issues:

(List any issues identified as part of this review. All issues should also be documented on Assessment Form 2.)

Concern:

- Support group pre-evolution brief was less than adequate. Form 2 C-COO-2/9204-4 QE-1
- Material conditions exist that affect safety. Form 2 C-COO-2/9204-4 QE-2

Observation:

- Communication improvement needed in areas not covered by announcing system. Form 2 C-COO-21/9204-4 QE-3
- Conduct of Operations assessment by building mentors in substantial agreement with audit team assessment. Form 2 C-COO-2/9204-4 QE-4
- Radiological control area entry point deficiencies. Form 2 C-COO-2/9204-4 QE-5

Noteworthy Practice:

- Pre-evolution brief for material move on 11/1/95 was very good. Form 2 C-COO-2/9204-4 QE 6
- Work assignment sheet to acknowledge expectations. Form 2 C-COO-2/9204-4 QE 7

Originator 

Date 11/8/95

Approved 

Date 11/9/95

## Assessment Form 2

Date: 10/31/95

Assessment Form 2 No.: C-COO-2/9204-4 QE-1

page 1

Review Area: Pre-evolution Brief

Responsible Individual: G. Francis

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

## I. Identification Section

## A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

Concern: Pre-evolution Brief for the criticality alarm and announcing system (CAAS) was less than adequate in that:

1. Pre-evolution brief was conducted without qualified individuals
  - The electrician had not conducted the test in this facility and was unfamiliar with location of master alarm panel.
  - A replacement electrician was obtained to perform test and train the original electricians.
2. Pre-evolution brief conducted without a checklist.
3. Pre-evolution brief conducted without an approved RWP.

## B. Information Requested

(List any information needed to further evaluate this item):

None



Assessment Form 2

Date: 10/31/95

Assessment Form 2 No.: C-COO-2/9204-4 OE-1

page 2

Review Area: Pre-evolution Brief

Responsible Individual: G. Francis

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).

For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.

For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.

For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

Pre-job briefing Y-10-35-004.

B. Documents reviewed, activities performed, persons contacted (include titles):

- Plant Services Support Supervisor
- Oak Ridge Conduct of Operations Manual
- CAAS monthly surveillance Y50-53-50-005 dated 10/16/95

III. Approval Section (Signatures)

Originator  Date 10/31/95

Approved  Date 11/9/95

Suggested Corrective Action:

Develop pre-evolution briefing requirements to be used by evolution supervisors to ensure that a proper brief is conducted for each evolution. Recommend this be included in the Conduct of Operations Manual.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

## Assessment Form 2

Date: 11/3/95

Assessment Form 2 No.: C-COO-2/9204-4 QE-2

page 1

Review Area: Material Conditions 9204-4 QE

Responsible Individual: G. E. Francis

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

## I. Identification Section

## A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

**Concern:** Material conditions exist that contribute to the appearance that management is not serious about safety in that a significant leak has been allowed to persist for over 1 year at Bldg. 9204-4 train dock.

## B. Information Requested

(List any information needed to further evaluate this item):

Status of work order for steam leak at train dock.

## II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).

For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.

For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.

For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

## A. Description of Basis:

OSHA noise standard

## B. Documents reviewed, activities performed, persons contacted (include titles):

- Work request for train dock steam leak
- Building 9204-4 deficiency list

Assessment Form 2

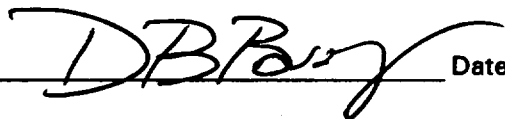
Date: 11/3/95

Assessment Form 2 No.: C-COO-2/9204-4 QE-2  
Review Area: Material Conditions 9204-4 QE  
Responsible Individual: G. E. Francis

page 2

III. Approval Section (Signatures)

Originator  Date 11/3/95

Approved  Date 11/9/95

Suggested Corrective Action:

Repair steam leak at entry to train dock.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

Assessment Form 2

Date: 11/1/95

Assessment Form 2 No.: C-COO-2/9204-4 QE-3  
Review Area: Evolution Control-Communications  
Responsible Individual: G. Francis

page 1

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.  
**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.  
**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.  
**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

Observation: No radios provided for transport team in tunnel Bldg. 9204-4. Personnel in tunnel area have only phone communication on building activities, in a situation where radios would be appropriate for command and control and when working in areas where the plant public address system cannot be heard.

- 19 people in tunnel to conduct or observe move
- No radio provided for evolution supervisor

B. Information Requested

None

(List any information needed to further evaluate this item):

Assessment Form 2

Date: 11/1/95

Assessment Form 2 No.: C-COO-2/9204-4 QE-3  
Review Area: Evolution Control-Communications  
Responsible Individual: G. Francis

page 2

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

DOE Order 5480.19, Chapter 4

B. Documents reviewed, activities performed, persons contacted (include titles):

Evolutions observed: material move 11/1/95

Interviews conducted:

Evolution Supervisor

III. Approval Section (Signatures)

Originator G. Francis *DBB* FOR Date 11/9/95

Approved *DBB* Date 11/9/95

Suggested Corrective Action:

Provide radios to personnel entering areas where announcing system is deficient.

Assessment Form 2

Date: 11/1/95

Assessment Form 2 No.: C-COO-2/9204-4 QE-3  
Review Area: Evolution Control-Communications  
Responsible Individual: G. Francis

page 3

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: COO-2/9204-4 QE-4

page 1

Review Area: Conduct of Operations Program Assessment Building 9204-4 QE

Responsible Individual: G. E. Francis

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

Observation: A review of the Conduct of Operations Implementation status in 9204-4 was conducted for the required elements of DOE Order 5480.19. The quantitative evaluations were substantially in agreement.

9204-4 evaluation	53%
Team evaluation	46%

B. Information Requested

(List any information needed to further evaluate this item):

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: COO-2/9204-4 QE-4

page 2

Review Area: Conduct of Operations Program Assessment Building 9204-4 QE

Responsible Individual: G. E. Francis

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).

For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.

For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.

For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.


A. Description of Basis:

Conduct of Operations Manual

B. Documents reviewed, activities performed, persons contacted (include titles):

- Conduct of Operations Implementation Plan
- Organization
- Rounds
- Communications
- Log keeping
- Shift turnover
- Timely orders
- Required reading
- Procedures
- Operator aids
- System status

III. Approval Section (Signatures)

Originator  Date 11/6/95

Approved  Date 11/9/95

Suggested Corrective Action:

Continue progress by implementing programs for Conduct of Operations.



Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: COO-2/9204-4 QE-4

page 3

Review Area: Conduct of Operations Program Assessment Building 9204-4 QE

Responsible Individual: G. E. Francis

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_

Date \_\_\_\_\_

Assessment Form 2

Date: 10/31/95

Assessment Form 2 No.: C-COO-2/9204-4 QE-5  
 Review Area: Radiological Control Area Entry Point - 9204-4 QE  
 Responsible Individual: G. Francis

page 1

**Finding** - A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.  
**Concern** - Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.  
**Observation** - Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.  
**Noteworthy Practices** - Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

Observation: Radiological control area entry point at 9204-4 men's locker room had the following deficiencies:

- Inadequate size selection for coveralls
- Not all RWPs available
- Excessive clutter in many areas
- Incomplete operator aids on donning and doffing anti-C's.

B. Information Requested

(List any information needed to further evaluate this item):

None

Assessment Form 2

Date: 10/31/95

Assessment Form 2 No.: C-COO-2/9204-4 QE-5  
Review Area: Radiological Control Area Entry Point - 9204-4 QE  
Responsible Individual: G. Francis

page 2

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

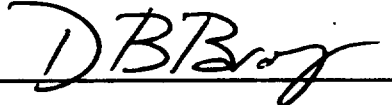
Y-12 Radiological Controls Manual.

B. Documents reviewed, activities performed, persons contacted (include titles):

Operations Manager 9204-4

III. Approval Section (Signatures)

Originator  Date 10/31/95

Approved  Date 11/9/95

Suggested Corrective Action:

Comply with entry point requirements

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

## Assessment Form 2

Date: 11/1/95

Assessment Form 2 No.: C-COO-2/9204-4 QE-6

page 1

Review Area: Pre-Evolution Brief

Responsible Individual: G. Francis

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

## I. Identification Section

## A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

**Noteworthy Practice:** Pre-evolution brief for material move into 9202-4 was very good.

The 9204-4 process for conducting pre-evolution briefs was very good.

- Checklists were used
- A script developed from the checklist provided an excellent overview of the activity
- RWP was covered in detail by HP foreman

## B. Information Requested

(List any information needed to further evaluate this item):

None

Assessment Form 2

Date: 11/1/95

Assessment Form 2 No.: C-COO-2/9204-4 QE-6

page 2

Review Area: Pre-Evolution Brief

Responsible Individual: G. Francis

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria). For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems. For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance. For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

Pre-evolution brief requirements exceeded.

B. Documents reviewed, activities performed, persons contacted (include titles):

Records reviewed:

- Checklists
- RWP

Evolutions observed:

Pre-evolution brief

III. Approval Section (Signatures)

Originator [Signature]

Date 11/1/95

Approved [Signature]

Date 11/9/95

Suggested Corrective Action:

The only improvement identified would be for the evolution supervisor to ask more open ended questions of participants to ensure understanding of evolution.

Assessment Form 2

Date: 11/1/95

Assessment Form 2 No.: C-COO-2/9204-4 QE-6

page 3

Review Area: Pre-Evolution Brief

Responsible Individual: G. Francis

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_

Date \_\_\_\_\_

Assessment Form 2

Date: 11/2/95

Assessment Form 2 No.: C-COO-2/9204-4 QE-7

page 1

Review Area: Communications

Responsible Individual: L. D. Butler

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.  
**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.  
**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.  
**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or **Noteworthy Practice**):

A written work assignment sheet was passed around at the end of crew briefing for workers to sign acknowledging exactly what is expected of each person.

B. Information Requested

(List any information needed to further evaluate this item):

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
 For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
 For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
 For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

DOE Order 5480.19, Chapter 12, Section C.5

B. Documents reviewed, activities performed, persons contacted (include titles):

Assessment Form 2

Date: 11/2/95

Assessment Form 2 No.: C-COO-2/9204-4 QE-7

page 2

Review Area: Communications

Responsible Individual: L..D. Butler

III. Approval Section (Signatures)

Originator *L.D. Butler* Date 11-8-95

Approved *L.D. Butler* Date 11/9/95

Suggested Corrective Action:

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_



**Assessment Form 1**

Date: 11/6/95

Assessment Form 1 No.: C-COO-3/9204-4 QE

page 1

Review Area: Corrective Actions Effectiveness Building 9204-4 QE

Responsible Individual: G. E. Francis

**I. Performance Objective: C-COO-3**

(List the Performance Objective number and description from the Assessment Program)

The corrective actions planned and accomplished by the contractor have been adequate and effective in addressing Conduct of Operations deficiencies.

**II. Expectations:**

(Provide the expectations for the Performance Objective as stated in the Assessment Program)

Upon completion of Performance Objective C-COO-3, the Assessment Team should be able to determine if:

- a. Conduct of Operations corrective actions taken and planned are adequate based on the root cause.
- b. Conduct of Operations corrective actions completed have been effective in improving work force performance.

**III. Review Criteria:**

(Provide the criteria used for conducting the review.)

The corrective actions taken to date have been adequate and have been effective in implementing positive change in the work force in Conduct of Operations.

**IV. Approach:**

(List the procedures and documents reviewed, names and titles of personnel interviewed, references used, and evolutions observed.)

**Records Reviewed:**

ESAM data for Building 9204-4

**Interviews Conducted:**

Operations Manager – 9204-4  
9204-4 Mentor  
Facility Maintenance and Operations Manager

**Evolutions Observed:**

- Pre-shift briefs
- Pre-evolution briefs
- Elements of Conduct of Operations

Assessment Form 1

Date: 11/6/95

Assessment Form 1 No.: C-COO-3/9204-4 QE

page 2

Review Area: Corrective Actions Effectiveness Building 9204-4 QE

Responsible Individual: G. E. Francis

V. Discussion of Results with Basis:

(Document the results of the review in sufficient detail using both the review criteria and the expectation statement as guidance.)

The extensive management attention brought to the Nuclear Operations Conduct of Operations has been effective in producing appropriate and effective corrective actions for the Nuclear Operations deficiencies in Conduct of Operations in Building 9204-4.

The assessment team observed several actions by support groups in the Nuclear Operations facilities that were less than adequate. The focus of management on the nuclear activities has had the desired result for the target group but the overall picture of Conduct of Operations is affected by all personnel in the facility.

Many corrective actions for Conduct of Operation deficiencies are applicable to support organizations. These support organizations are not at the same level of Conduct of Operations and need management attention and focus.

VI. Conclusion:

(Concluding statement based on the discussion of results. The statement should conclude whether the criteria of the objective was met.)

Corrective Action effectiveness criteria is met for Bldg. 9204-4.

VII. Issues:

(List any issues identified as part of this review. All issues should also be documented on Assessment Form 2.)

None, support group deficiencies are covered separately.

Originator



Date

11/8/95

Approved



Date

11/9/95

## Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-1/EUTO  
Review Area: Conduct of Operations Program  
Responsible Individual: L. D. Butler

page 1

**I. Performance Objective: C-COO-1**

(List the Performance Objective number and description from the Assessment Program)

The requirements of DOE Order 5480.19 have been adequately planned for implementation and will be of a level of quality required by today's performance standards complex-wide.

**II. Expectations:**

(Provide the expectations for the Performance Objective as stated in the Assessment Program)

Upon completion of Performance Objective C-COO-1, the Assessment Team should be able to determine if:

- a. The Y-12 Plant Conduct of Operations Program as planned and being implemented will be sufficiently comprehensive.
- b. The Y-12 Program will have adequate resources and adequate management involvement.
- c. The Y-12 Program will meet today's DOE-wide standards for an adequate Conduct of Operations Program.

**III. Review Criteria:**

(Provide the criteria used for conducting the review.)

The Conduct of Operations Program at the Y-12 Plant meets today's quality level expected within the DOE-complex. The Program should promote adequate Conduct of Operations performance when implemented.

**Assessment Form 1**

Date: 11/7/95

**Assessment Form 1 No.: C-COO-1/EUTO**  
**Review Area: Conduct of Operations Program**  
**Responsible Individual: L. D. Butler**

page 2

**IV. Approach:**

(List the procedures and documents reviewed, names and titles of personnel interviewed, references used, and evolutions observed.)

**Records Reviewed:**

Required Reading Binder in 9215 MAA  
Timely Orders Binder in 9215 MAA  
Operator Aids Binder in 9215 MAA  
Y-12 Conduct of Operations Manual

**Interviews Conducted:**

Manager, Enriched Uranium Operations  
Deputy Manager, Enriched Uranium Operations  
Building 9215/9998 Operations Manager  
EUTO Production Manager  
EUTO Mentor  
9215 Building Manager  
9215 Maintenance Manager  
9215 Complex Shift Manager  
EUTO Material Controllers  
EUTO Material Clerks

**Evolutions Observed:**

9215 EUTO Pre-Shift Briefing on 10/31 and 11/3  
9270-5 Pre-Shift Briefing on 11/1  
9204-4 Pre-Shift Briefing on 11/2  
9215 Complex POD on 10/31 and 11/3  
9204-2E Operations Area Plan of the Day on 11/1  
9204-4 Plan of the Day on 11/2  
Refueling of SNM Vehicle, including pre-job briefing, Startup checkoff sheet, and radio communications  
Pre-job briefing for SNM Movement for SNM Vehicle Operations

## Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-1/EUTO  
Review Area: Conduct of Operations Program  
Responsible Individual: L. D. Butler

page 3

**V. Discussion of Results with Basis:**

(Document the results of the review in sufficient detail using both the review criteria and the expectation statement as guidance.)

The foundation for formal conduct of operations is present in the Enriched Uranium Transportation (EUTO) Organization. The program as planned and as being implemented will be sufficiently comprehensive.

Management is committed to ensuring all operations incorporate the concepts of formality throughout all parts of the organization. Presently only nine chapters of the Nuclear Operations Conduct of Operations Manual have been implemented. Four others are in the process of being implemented and four others are scheduled for implementation within the next two months. Three chapters are considered not applicable to the EUTO organization. Because of this, the program in the EUTO organization does not yet meet today's DOE-wide standards for an adequate Conduct of Operations program, but observations, records review, and interviews indicate that this organization has a good start and is headed in the right direction.

**VI. Conclusion:**

(Concluding statement based on the discussion of results. The statement should conclude whether the criteria of the objective was met.)

The criteria of this objective have been met.

**VII. Issues:**

(List any issues identified as part of this review. All issues should also be documented on Assessment Form 2.)

There is one concern:

The applicability matrix for 9215 EUTO was not filed in the 9215 copies of the Conduct of Operations Manual (Form 2, C-COO-2/EUTO-1)

Originator



Date

11/8/95

Approved



Date

11/9/95

## Assessment Form 2

Date: 11/3/95

Assessment Form 2 No.: C-COO-2/Training and Drills-6  
 Review Area: DRILL/Hazardous Material Spill  
 Responsible Individual: L. D. Butler

page 1

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

## I. Identification Section

## A. Statement

(Provide exact wording of the potential or final Finding, Concern Observation or Noteworthy Practice):

A drill involving a spill of hazardous material was observed.

## CONCLUSIONS:

Drill performance was satisfactory; objectives were met. The drill has training benefit.

## PERFORMANCE DEFICIENCIES:

1. Spill never stopped nor were barriers erected completely around the spill area.
2. The fireman and Environmental Response Team person who responded simulated actions rather than performing them (on their own authority without prompting by the Drill Coordinator).
3. Spill response kit not brought to the scene for 10 minutes.
4. Confusion initially over who was to be in charge of cleanup after Environmental Response personnel arrived.
5. PA announcements were ineffective at informing people of status of the situation and keeping uninvolved people out of the affected area.

## COMMENT:

1. STA's actions to obtain procedure, notify Shift Manger, and obtain spill kit were good.
2. Good questions asked of environmental response person by employee discovering the spill.

## DRILL SIMULATION CONCERNS:

1. The spill area did not expand which lead participants to not be concerned about stopping or completely containing the spill.
2. Observers were required to leave the area the same as participants which limited their ability to evaluate actions.
3. Drill guide did not cover expected actions of outside response personnel, yet drill was conducted to include their actions.
4. Participants were unclear as to "rules" for conducting drills, e.g., how much should be actually performed, who was allowed where.
5. PSS was notified ahead of time precluding evaluation of his/her response.
6. PA announcement about the drill was made before it started. A drill was scheduled on the POD. This pre-alertment does not effectively evaluate response during a normal work situation.

## B. Information Requested

(List any information needed to further evaluate this item):

Assessment Form 2

Date: 11/7/95

Assessment Form 2 No.: C-COO-1/EUTO-1

page 1

Review Area: Applicability Matrix

Responsible Individual: L. D. Butler

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

The applicability matrix for 9215 EUTO was not filed in either the Shift Manager's or the Operations Manager's Conduct of Operations Manual.

B. Information Requested

(List any information needed to further evaluate this item):

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).

For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.

For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.

For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

DOE order 5480.19, paragraph 5C

B. Documents reviewed, activities performed, persons contacted (include titles):

Conduct of Operations Manual  
9215 Complex Shift Manager

Assessment Form 2

Date: 11/7/95

Assessment Form 2 No.: C-COO-1/EUTO-1

page 2

Review Area: Applicability Matrix

Responsible Individual: L. D. Butler

III. Approval Section (Signatures)

Originator *L. D. Butler* Date 11/7/95

Approved *DBBroy* Date 11/9/95

Suggested Corrective Action:

File a copy of the applicability matrix for each facility under the Operations Manager and Shift Manager's cognizance in the Conduct of Operations Manual

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_



## Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-2/EUTO  
Review Area: Conduct of Operations Implementation  
Responsible Individual: L. D. Butler

page 1

**I. Performance Objective: C-COO-2**

(List the Performance Objective number and description from the Assessment Program)

The quality level of implementation of DOE Order 5480.19 in facilities is adequate based on today's DOE-wide performance standards.

**II. Expectations:**

(Provide the expectations for the Performance Objective as stated in the Assessment Program)

Upon completion of Performance Objective C-COO-2, the Assessment Team should be able to determine the quality level of the implemented Conduct of Operations elements relative to benchmarked programs and to determine if:

- a. Ownership and understanding of Conduct of Operations requirements by the work force are adequate based on today's standards.
- b. Work is conducted according to Conduct of Operations requirements.

**III. Review Criteria:**

(Provide the criteria used for conducting the review.)

The quality level of implemented elements of DOE Order 5480.19 in facilities meets today's DOE-wide performance standards based on the Assessment Team's experience with Rocky Flats, Pantex, and Savannah River Conduct of Operations Program performance.

**Assessment Form 1**

Date: 11/7/95

Assessment Form 1 No.: C-COO-2/EUTO  
Review Area: Conduct of Operations Implementation  
Responsible Individual: L. D. Butler

page 2

**IV. Approach:**

(List the procedures and documents reviewed, names and titles of personnel interviewed, references used, and evolutions observed.)

**Records Reviewed:**

Required Reading Binder in 9215 MAA  
Timely Orders Binder in 9215 MAA  
Operator Aids Binder in 9215 MAA  
9215 Lockout/Tagout Log  
9215 Shift Manager's Log  
Y-12 Conduct of Operations Manual

**Interviews Conducted:**

Manager, Enriched Uranium Operations  
Deputy Manager, Enriched Uranium Operations  
Building 9215/9998 Operations Manager  
EUTO Production Manager  
EUTO Mentor  
9215 Building Manager  
9215 Maintenance Manager  
9215 Complex Shift Manager  
EUTO Material Controllers  
EUTO Material Clerks  
Plant Shift Superintendent

**Evolutions Observed:**

9215 EUTO Pre-Shift Briefing on 10/31 and 11/3  
9270-5 Pre-Shift Briefing on 11/1  
9204-4 Pre-Shift Briefing on 11/2  
9215 Complex POD on 10/31 and 11/3  
9204-2E Operations Area Plan of the Day on 11/1  
9204-4 Plan of the Day on 11/2  
Refueling of SNM Vehicle, including pre-job briefing, Startup checkoff sheet, and radio communications  
Pre-job briefing for SNM Movement for SNM Vehicle Operations  
Site Operations Briefing

## Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-2/EUTO  
Review Area: Conduct of Operations Implementation  
Responsible Individual: L. D. Butler

page 3

**V. Discussion of Results with Basis:**

(Document the results of the review in sufficient detail using both the review criteria and the expectation statement as guidance.)

The review of the Conduct of Operations Implementation Status utilized the experience gained observing operations at Rocky Flats and first hand experience implementing Conduct of Operations at Pantex nuclear facilities. During the review, recommendations were provided to the managers and workers based on that experience to assist them in making improvements in their program.

The process of using full-time mentors, requiring hands-on activity by the Shift Manager, Operations Manager, and Production Manager in day-to-day activities, and the significant training conducted in the last year have been successful in achieving an excellent level of disciplined attitude and performance of work in EUTO Operations. The mentor program has been especially effective within the 9215 EUTO organization.

During interviews and observations on the floor, both workers and managers demonstrated excellent ownership and understanding of formal Conduct of Operations. The root causes of the September, 1994 CSA Incident were well understood by the work force in EUTO and work is being undertaken according to formal Conduct of Operations principles.

Based on observations of daily practices and evolutions, communications requirements of chapter 4 of DOE Order 5480.19 were largely ignored. Pre-job briefings were conducted in accordance with the checklists appended to the procedure, were thorough, and received positive contributions from attendees. Knowledge of FSAR requirements was excellent by both management and the work force. Housekeeping in EUTO activities was adequate.

Evaluations of the implementation status and quality were compared with the Plant Management's self assessment of status conducted by mentors. These evaluations were consistent, indicating that self-assessment standards accurately reflect facility status.

**VI. Conclusion:**

(Concluding statement based on the discussion of results. The statement should conclude whether the criteria of the objective was met.)

Conduct of Operations performance in 9215 EUTO is adequate. The criteria for Conduct of Operations implementation in 9215 EUTO has been satisfied.

Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-2/EUTO  
Review Area: Conduct of Operations Implementation  
Responsible Individual: L. D. Butler

page 4

VII. Issues:

(List any issues identified as part of this review. All issues should also be documented on Assessment Form 2.)

A. There are two findings:

- 1. The Public Address system is not used effectively. (Form 2, C-COO-2/EUTO-1)
- 2. Voice communications are informal and not precise. Repeatbacks are neither used nor required. (Form 2, C-COO-2/EUTO-2)

B. There are three concerns:

- 1. Pre-shift briefings need organization. (Form 2, C-COO-2/EUTO-3)
- 2. ETO timely order effectiveness is diluted. (Form 2, C-COO-2/EUTO-4)
- 3. Workers need to record unusual items in remarks section of round sheets. (Form 2, C-COO-2/EUTO-5)

C. There are two observations:

- 1. CONOPS Implementation Status for 9215 EUTO. (Form 2, C-COO-2/EUTO-6)
- 2. Cancellation of monthly audio test of criticality accident alarm system. (Form 2, C-COO-2/EUTO-7)

D. There are two noteworthy practices:

- 1. Pre-job briefings in 9215 EUTO. (Form 2, C-COO-2/EUTO-8)
- 2. Effective mentor program in 9215 EUTO. (Form 2, C-COO-2/EUTO-9)

Originator                     *L. D. Butler*                    

Date           11/9/95          

Approved                     *DBB*                    

Date           11/9/95

Assessment Form 2

Date: 11/4/95

Assessment Form 2 No.: C-COO-2/EUTO-1 Review Area: Communications Responsible Individual: L. D. Butler	page 1
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**Finding** -- A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.  
**Concern** -- Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.  
**Observation** -- Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.  
**Noteworthy Practices** -- Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

**I. Identification Section**

**A. Statement**  
 (Provide exact wording of the potential or final **Finding**, Concern, Observation or Noteworthy Practice):

The public address system is not used effectively.

(1) Personnel routinely ignore public address announcements.

(2) Public address systems are routinely used to page individual personnel.

**B. Information Requested**  
 (List any information needed to further evaluate this item):

**II. Basis Section**

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
 For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
 For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
 For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

**A. Description of Basis:**

DOE Order 5480.19, Chapter 4, Section B, C.2

**B. Documents reviewed, activities performed, persons contacted (include titles):**

Assessment Form 2

Date: 11/4/95

Assessment Form 2 No.: C-COO-2/EUTO-1

page 2

Review Area: Communications

Responsible Individual: L. D. Butler

III. Approval Section (Signatures)

Originator *L. D. Butler* Date 11/4/95

Approved *DB Boy* Date 11/9/95

Suggested Corrective Action:

Improve effectiveness and understanding of use of PA systems in accordance with Chapter 4 of DOE Order 5480.19.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

Assessment Form 2

Date: 11/4/95

Assessment Form 2 No.: C-COO-2/EUTO-2

page 1

Review Area: Communications

Responsible Individual: L. D. Butler

**Finding** -- A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.  
**Concern** -- Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.  
**Observation** -- Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.  
**Noteworthy Practices** -- Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final finding, Concern, Observation or Noteworthy Practice):

Voice communications are informal and not precise. Repeatbacks are neither used nor required.

B. Information Requested

(List any information needed to further evaluate this item):

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
 For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
 For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
 For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

DOE Order 5480.19, Chapter 4, Sections B, C5, C6

B. Documents reviewed, activities performed, persons contacted (include titles):

Evolutions Observed:

EUTO vehicle movement on 10/31/95 and 11/1/95  
 Radio communications 10/31/95 through 11/3/95.

Assessment Form 2

Date: 11/4/95

Assessment Form 2 No.: C-COO-2/EUTO-2

page 2

Review Area: Communications

Responsible Individual: L. D. Butler

III. Approval Section (Signatures)

Originator LD Butler Date 11/4/95

Approved DB Bradford Date 11/9/95

Suggested Corrective Action:

Implement the requirements of DOE Order 5480.19, Chapter 4, Communications.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_



Assessment Form 2

Date: 10/31/95

Assessment Form 2 No.: C-COO-2/EUTO-3  
 Review Area: Pre-shift Briefings and Plan of the Day Meetings  
 Responsible Individual: L. D. Butler

page 1

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.  
**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.  
**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.  
**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

Observation:

Work schedule put out on POD and pre-shift briefing frequently changed (in EUTO).

1. One pre-shift briefing conducted by the shift supervision (in EUTO) was disorganized and frequently interrupted.
2. One pre-shift briefing conducted by the production manager in EUTO was better and included a good short lecture on "Work Stop Authority."

B. Information Requested

(List any information needed to further evaluate this item):

None

Assessment Form 2

Date: 10/31/95

Assessment Form 2 No.: C-COO-2/EUTO-3  
Review Area: Pre-shift Briefings and Plan of the Day Meetings  
Responsible Individual: L. D. Butler

page 2

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

DOE Order 5480.19, Chap. 12, Section C.5

B. Documents reviewed, activities performed, persons contacted (include titles):

Observed two pre-shift briefings by EUTO and for comparison observed pre-shift briefings for two other facilities.

Observed two POD meetings by EUTO and for comparison observed POD meetings in two other facilities.

III. Approval Section (Signatures)

Originator *L. D. Butler* Date 10/31/95

Approved *DB Bay* Date 11/9/95

Suggested Corrective Action:

Develop a plant procedure for how to conduct plan of the day meetings. Conduct pre-shift briefings in accordance with Nuclear Operations Conduct of Operations Manual.

**Assessment Form 2**

Date: 10/31/95

<b>Assessment Form 2 No.: C-COO-2/EUTO-3</b>	page <u>3</u>
<b>Review Area: Pre-shift Briefings and Plan of the Day Meetings</b>	
<b>Responsible Individual: L. D. Butler</b>	

<b>IV. Contractor/DOE Response</b> (Provide results of Contractor/DOE review with technical basis and references.)
N/A
Accepted By: _____ Date _____

Assessment Form 2

Date: 11/2/95

Assessment Form 2 No.: C-COO-2/EUTO-4

page 1

Review Area: Timely Orders to Operators

Responsible Individual: L. D. Butler

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.  
**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.  
**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.  
**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

Concern:

EUO Timely Orders were recently consolidated into a central location resulting in personnel being required to read and sign that they understand all the material in the binder. Since many technical standing orders apply to only one or two areas, people who don't work in those areas do not understand those standing orders. By requiring everyone to read every standing order, their effectiveness is diluted.

B. Information Requested

(List any information needed to further evaluate this item):

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
 For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
 For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
 For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

DOE Order 5480.19, Chapter 15

B. Documents reviewed, activities performed, persons contacted (include titles):

Assessment Form 2

Date: 11/2/95

Assessment Form 2 No.: C-COO-2/EUTO-4  
Review Area: Timely Orders to Operators  
Responsible Individual: L. D. Butler

page 2

III. Approval Section (Signatures)

Originator LD Butler Date 11/2/95

Approved DB Bay Date 11/9/95

Suggested Corrective Action:

Either decentralize Timely Orders to the Department level or designate specific orders as effective for their applicable areas.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

Assessment Form 2

Date: 11/4/95

Assessment Form 2 No.: C-COO-2/EUTO-5

page 1

Review Area: Daily Rounds

Responsible Individual: L. D. Butler

**Finding** -- A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** -- Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** -- Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** -- Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

Observed daily rounds in 9215 "M" wing by EUTO personnel:

**Noteworthy Practices:** The workers checked for unusual items. They discovered water leaking in the basement mop water collection area. Took immediate action to notify appropriate personnel, evacuate area, and station a person to restrict access to the basement.

**Concern:** The workers did not record anything in the remarks section of the rounds sheet until prompted.

B. Information Requested

(List any information needed to further evaluate this item):

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).

For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.

For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.

For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

DOE Order 5480.19, Chapter 2, Section C.4

B. Documents reviewed, activities performed, persons contacted (include titles):

Assessment Form 2

Date: 11/4/95

Assessment Form 2 No.: C-COO-2/EUTO-5

page 2

Review Area: Daily Rounds

Responsible Individual: L. D. Butler

III. Approval Section (Signatures)

Originator L. D. Butler Date 11/4/95

Approved DB Bay Date 11/9/95

Suggested Corrective Action:

Train workers to record any unusual items in remarks section to ensure supervisors and managers are made aware of deficiencies.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

## Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-2/EUTO-6

page 1

Review Area: Conduct

Responsible Individual: L. D. Butler

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

## I. Identification Section

## A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

A review of the Conduct of Operations Implementation Status in 9215 Enriched Uranium Transportation Operations was conducted for the required elements of DOE Order 5480.19. The level of quality in the facility is adequate based on today's DOE-wide performance standards. Evaluations of the implementation status and quality were compared with the Plant Management's self assessment of status conducted by mentors. These evaluations were consistent, indicating that self-assessment standards accurately reflect facility status.

## B. Information Requested

(List any information needed to further evaluate this item):



## Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-2/EUTO-6

page 2

Review Area: Conduct

Responsible Individual: L. D. Butler

**II. Basis Section**

**For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).**

**For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.**

**For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.**

**For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.**

**A. Description of Basis:**

DOE Order 5480.19

**B. Documents reviewed, activities performed, persons contacted (include titles):****Records Reviewed:**

Required Reading Binder in 9215 MAA

Timely Orders Binder in 9215 MAA

Operator Aids Binder in 9215 MAA

9215 Lockout/Tagout Log

9215 Shift Manager's Log

Y-12 Conduct of Operations Manual

**Interviews Conducted:**

Manager, Enriched Uranium Operations

Deputy Manager, Enriched Uranium Operations

Building 9215/9998 Operations Manager

EUTO Production Manager

EUTO Mentor

9215 Building Manager

9215 Maintenance Manager

9215 Complex Shift Manager

EUTO Material Controllers

EUTO Material Clerks

Plant Shift Superintendent

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-2/EUTO-6

page 3

Review Area: Conduct

Responsible Individual: L. D. Butler

Evolutions Observed:

9215 EUTO Pre-Shift Briefing on 10/31 and 11/3

9720-5 Pre-Shift Briefing on 11/1

9204-4 Plan of the Day on 11/2

9204-2E Operations Area Plan of the Day on 11/1

Refueling of SNM Vehicle, including pre-job briefing, Startup checkoff sheet, and radio communications

Pre-job briefing for SNM Movement for SNM Vehicle Operations

Site Operations Briefing

III. Approval Section (Signatures)

Originator L. D. Butler Date 11/8/95

Approved DB Brany Date 11/9/95

Suggested Corrective Action:

N/A

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-2/EUTO-7

page 1

Review Area: Work Authorization

Responsible Individual: L. D. Butler

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

Monthly audio test of criticality accident alarm system was scheduled for 2200 Friday, 3 November. The Plant Shift Superintendent did not allow the maintenance to proceed because of three questions with the maintenance procedure that could not be resolved.

B. Information Requested

(List any information needed to further evaluate this item):

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-2/EUTO-7

page 2

Review Area: Work Authorization

Responsible Individual: L. D. Butler

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).

For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems. For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.

For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

DOE Order 5480.19, paragraph C.6

B. Documents reviewed, activities performed, persons contacted (include titles):

Persons Contacted:

Plant Shift Superintendent  
9215 Complex Shift Manager  
9215 Complex Operation Manager

III. Approval Section (Signatures)

Originator *L. D. Butler* Date 11/7/95

Approved *D. B. Bay* Date 11/9/95

Suggested Corrective Action:

None

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-2/EUTO-7

page 3

Review Area: Work Authorization

Responsible Individual: L. D. Butler

**IV. Contractor/DOE Response**

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

Assessment Form 2

Date: 11/4/95

Assessment Form 2 No.: C-COO-2/EUTO-8

page 1

Review Area: Pre-job Briefings

Responsible Individual: L. D. Butler

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.  
**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.  
**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.  
**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice.)

Pre-job briefings observed were thorough, used all the checklists and elicited participation from effected personnel.

B. Information Requested

(List any information needed to further evaluate this item):

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
 For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
 For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
 For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

B. Documents reviewed, activities performed, persons contacted (include titles):

Assessment Form 2

Date: 11/4/95

Assessment Form 2 No.: C-COO-2/EUTO-8		page 2
Review Area: Pre-job Briefings		
Responsible Individual: L. D. Butler		
III. Approval Section (Signatures)		
Originator	<u>LD Butler</u>	Date <u>11/4/95</u>
Approved	<u>LD Butler</u>	Date <u>11/9/95</u>
Suggested Corrective Action:		
N/A		
IV. Contractor/DOE Response		
(Provide results of Contractor/DOE review with technical basis and references.)		
N/A		
Accepted By:	_____	Date _____

Assessment Form 2

Date: 11/4/95

Assessment Form 2 No.: C-COO-2/EUTO-9  
Review Area: Mentor Program Implementation in 9215  
Responsible Individual: L. D. Butler

page 1

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.  
**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.  
**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.  
**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

The mentor program has been effective within the 9215 EUTO Organization. The assigned mentor is well received and has contributed much technical advice to the Production Manager.

B. Information Requested

(List any information needed to further evaluate this item):

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

Y/AD-627

B. Documents reviewed, activities performed, persons contacted (include titles):

Interviews Conducted:

EUTO Mentor  
EUTO Production Manager  
Several workers assigned to EUTO



Assessment Form 2

Date: 11/4/95

Assessment Form 2 No.: C-COO-2/EUTO-9

page 2

Review Area: Mentor Program Implementation in 9215

Responsible Individual: L. D. Butler

III. Approval Section (Signatures)

Originator L. D. Butler Date 11/4/95

Approved [Signature] Date 11/9/95

Suggested Corrective Action:

N/A

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

**Assessment Form 1**

Date: 11/7/95

Assessment Form 1 No.: C-COO-3/EUTO  
Review Area: Corrective Actions Effectiveness  
Responsible Individual: L. D. Butler

page 1

**I. Performance Objective: C-COO-3**

(List the Performance Objective number and description from the Assessment Program)

The corrective actions planned and accomplished by the contractor have been adequate and effective in addressing Conduct of Operations deficiencies.

**II. Expectations:**

(Provide the expectations for the Performance Objective as stated in the Assessment Program)

Upon completion of Performance Objective C-COO-3, the Assessment Team should be able to determine if:

- a. Conduct of Operations corrective actions taken and planned are adequate based on the root cause.
- b. Conduct of Operations corrective actions completed have been effective in improving work force performance.

**III. Review Criteria:**

(Provide the criteria used for conducting the review.)

The corrective actions taken to date have been adequate and have been effective in implementing positive change in the work force in Conduct of Operations.

## Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-3/EUTO  
Review Area: Corrective Actions Effectiveness  
Responsible Individual: L. D. Butler

page 2

**IV. Approach:**

(List the procedures and documents reviewed, names and titles of personnel interviewed, references used, and evolutions observed.)

**Records Reviewed:**

Building 9215 Lockout/Tagout Log  
Required Reading Binder in 9215 MAA  
Timely Orders Binder in 9215 MAA  
Operator Aids Binder in 9215 MAA  
Operating Procedure for SNM Vehicle  
Y-12 Conduct of Operations Manual

**Interviews Conducted:**

Manager, Enriched Uranium Operations  
Deputy Manager, Enriched Uranium Operations  
Building 9215/9998 Operations Manager  
EUTO Production Manager  
9215 Building Manager  
9215 Maintenance Manager  
9215 Complex Shift Manager  
EUTO Material Controllers  
EUTO Material Clerks

**Evolutions Observed:**

9215 EUTO Pre-Shift Briefing on 10/31 and 11/3  
9270-5 Pre-Shift Briefing on 11/1  
9204-4 Pre-Shift Briefing on 11/2  
9215 Complex POD on 10/31 and 11/3  
9204-2E Operations Area Plan of the Day on 11/1  
9204-4 Plan of the Day on 11/2  
Refueling of SNM Vehicle, including pre-job briefing, Startup checkoff sheet, and radio communications  
Pre-job briefing for SNM Movement for SNM Vehicle Operations

**V. Discussion of Results with Basis:**

(Document the results of the review in sufficient detail using both the review criteria and the expectation statement as guidance.)

Corrective actions planned and accomplished as the result of DNFSB assessments, DOE Facility Representative Issues, and Management Self Assessments are adequate based on root causes identified. Conduct of Operations corrective actions inspected appear to have been effective in improving work force performance with respect to formal conduct of operations standards.

Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-3/EUTO Review Area: Corrective Actions Effectiveness Responsible Individual: L. D. Butler	page 3
<b>VI. Conclusion:</b> (Concluding statement based on the discussion of results. The statement should conclude whether the criteria of the objective was met.)  Corrective actions taken to date in EUTO have been adequate and have been effective in implementing positive change in the work force in Conduct of Operations.	
<b>VII. Issues:</b> (List any issues identified as part of this review. All issues should also be documented on Assessment Form 2.)  None	
Originator <u>W. Bush</u>	Date <u>11/8/95</u>
Approved <u>DB Bran</u>	Date <u>11/9/95</u>

**Assessment Form 1**

Date: 11/7/95

Assessment Form 1 No.: C-COO-1/Lockout/Tagout  
Review Area: Conduct of Operations Program; Lockout/Tagout  
Responsible Individual: L. D. Butler

page 1

**I. Performance Objective: C-COO-1**

(List the Performance Objective number and description from the Assessment Program)

The requirements of DOE Order 5480.19 have been adequately planned for implementation and will be of a level of quality required by today's performance standards complex-wide.

**II. Expectations:**

(Provide the expectations for the Performance Objective as stated in the Assessment Program)

Upon completion of Performance Objective C-COO-1, the Assessment Team should be able to determine if:

- a. The Y-12 Plant Conduct of Operations Program as planned and being implemented will be sufficiently comprehensive.
- b. The Y-12 Program will have adequate resources and adequate management involvement.
- c. The Y-12 Program will meet today's DOE-wide standards for an adequate Conduct of Operations Program.

**III. Review Criteria:**

(Provide the criteria used for conducting the review.)

The Conduct of Operations Program at the Y-12 Plant meets today's quality level expected within the DOE-complex. The Program should promote adequate Conduct of Operations performance when implemented.

## Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-1/Lockout/Tagout  
Review Area: Conduct of Operations Program; Lockout/Tagout  
Responsible Individual: L. D. Butler

page 2

**IV. Approach:**

(List the procedures and documents reviewed, names and titles of personnel interviewed, references used, and evolutions observed.)

**Records Reviewed:**

Lockout/Tagout Log in 9215 MAA M-Wing  
Lockout/Tagout Log in 9720-5  
Lockout/Tagout Log in 9204-4  
Lockout/Tagout Procedure Y70-527  
Proposed Lockout/Tagout Procedure IS-107

**Interviews Conducted:**

9720-5 Facility Support Engineer  
9215 Building Manager  
9215 Maintenance Coordinator  
9215 Shift Manager

**Evolutions Observed:**

Hanging of Lockout/Tagout in preparation for electrical maintenance in 9720-5

**V. Discussion of Results with Basis:**

(Document the results of the review in sufficient detail using both the review criteria and the expectation statement as guidance.)

- a. The Y-12 Lockout/Tagout Program as planned and being implemented is sufficiently comprehensive.
- b. The Y-12 Lockout/Tagout Program has adequate resources and adequate management involvement.
- c. The Y-12 Lockout/Tagout Program does not meet today's DOE-wide practice in that independent verification is not required.

**VI. Conclusion:**

(Concluding statement based on the discussion of results. The statement should conclude whether the criteria of the objective was met.)

Independent Verification should be required to ensure the adequacy of lockout/tagout coverage and that locks and tags are hung correctly.

Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-1/Lockout/Tagout  
Review Area: Conduct of Operations Program; Lockout/Tagout  
Responsible Individual: L. D. Butler

page 3

VII. Issues:

(List any issues identified as part of this review. All issues should also be documented on Assessment Form 2.)

There is one finding:

A. The Y-12 Lockout/Tagout Program does not meet today's DOE-wide practice in that neither the present procedure (Y70-527) nor the procedure to be implemented in December, 1995 (IS-107):

1. Does not specify independent verification of the adequacy of the lockout/tagout coverage.
2. Does not require independent verification that locks and tags are hung on the correct component.
3. Does not require independent verification that components being locked and/or tagged out are in the position specified on the lockout/tagout permit.

Although these elements are not specifically required in DOE Order 5480.19, chapter 9; these actions are expected for lockouts/tagouts that do not meet the requirements for single point lockout. These actions are required in DOE-STD-1030-92, section 4.4.1 and DOE-STD-1036-93, section 4.2.1, which provide direction for Lockouts and Tagouts and Independent Verification. (Form 2, C-COO-1/Lockout-Tagout-1)

B. There is one concern:

Neither the present Lockout/Tagout Procedure (Y70-527) nor the proposed revised procedure (IS-107) specify the periodicity of periodic inspections. (Form 2, C-COO-1/Lockout-Tagout-2)

Originator L. D. Butler

Date 11/8/95

Approved D. B. Brady

Date 11/9/95

## Assessment Form 2

Date: 11/1/95

Assessment Form 2 No.: C-COO-1/Lockout-Tagout-1

page 1

Review Area: Lockout/Tagout Procedure

Responsible Individual: L. D. Butler

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

## I. Identification Section

## A. Statement

(Provide exact wording of the potential or final **Finding**, Concern, Observation or Noteworthy Practice):

Neither the present Lockout/Tagout Procedure (Y70-527) nor the proposed revised procedure (IS-107).

1. Specify independent verification that locks and tags are hung on the correct component.
2. Require independent verification that locks and tags are hung on the correct component.
3. Require independent verification that components being locked and/or tagged out are in the position specified on the lockout/tagout permit.

Although these elements are not specifically required in DOE Order 5480.19, Chapter 9; these actions are expected for lockouts/tagouts that do not meet the requirements for single point lockout. These actions are required in DOE-STD-1030-92, Section 4.4.1 and DOE-STD-1036-93, Section 4.2.1, which provide direction for Lockouts and Tagouts and Independent Verification.

## B. Information Requested

(List any information needed to further evaluate this item):



Assessment Form 2

Date: 11/1/95

Assessment Form 2 No.: C-COO-1/Lockout-Tagout-1

page 2

Review Area: Lockout/Tagout Procedure

Responsible Individual: L. D. Butler

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).

For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.

For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.

For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

- 1. DOE Order 5480.19, Chapter IX, paragraph A
- 2. DOE-STD-1030-92, Section 4.4.1
- 3. DOE-STD-1036-93, Section 4.2.1

B. Documents reviewed, activities performed, persons contacted (include titles):

- 1. Directive Y70-527 (Including Rev. 2)
- 2. LMES Management Control Procedure IS-107, Revision 1

III. Approval Section (Signatures)

Originator LD Butler Date 11/1/95

Approved DB Bay Date 11/9/95

Suggested Corrective Action:

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1/Lockout-Tagout-2  
 Review Area: Lockout/Tagout Procedure  
 Responsible Individual: L. D. Butler

page 1

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.  
**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.  
**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.  
**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

**I. Identification Section**

**A. Statement**

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

Neither the present Lockout/Tagout Procedure (Y70-527) nor the proposed revised procedure (IS-107) specify the periodicity of periodic inspections.

**B. Information Requested**

(List any information needed to further evaluate this item):

**II. Basis Section**

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
 For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
 For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
 For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

**A. Description of Basis:**

1. DOE Order 5480.19, Chapter IX, Paragraph C.8
2. DOE-STD-1030-92, Section 4.8

**B. Documents reviewed, activities performed, persons contacted (include titles):**

Y-12 Health and Safety Procedure, Y70-527  
 LMES Management Control Procedure, IS-107, Revision 1

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1/Lockout-Tagout-2

page 2

Review Area: Lockout/Tagout Procedure

Responsible Individual: L. D. Butler

III. Approval Section (Signatures)

Originator L. D. Butler Date 11/6/95

Approved D. A. Boraw Date 11/9/95

Suggested Corrective Action:

Specify in plant procedures a periodicity for conducting periodic inspections. It is recommended that these inspections include all the elements of Section 4.8 of DOE-STD-1030-92 and that these inspections be done at least monthly.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

**Assessment Form 1**

Date: 11/7/95

Assessment Form 1 No.: C-COO-2/Lockout-Tagout

page 1

Review Area: Conduct of Operations Implementation; Lockout/Tagout

Responsible Individual: L. D. Butler

**I. Performance Objective: C-COO-2**

(List the Performance Objective number and description from the Assessment Program)

The quality level of implementation of DOE Order 5480.19 in facilities is adequate based on today's DOE-wide performance standards.

**II. Expectations:**

(Provide the expectations for the Performance Objective as stated in the Assessment Program)

Upon completion of Performance Objective C-COO-2, the Assessment Team should be able to determine the quality level of the implemented Conduct of Operations elements relative to benchmarked programs and to determine if:

a. Ownership and understanding of Conduct of Operations requirements by the work force are adequate based on today's standards.

b. Work is conducted according to Conduct of Operations requirements.

**III. Review Criteria:**

(Provide the criteria used for conducting the review.)

The quality level of implemented elements of DOE Order 5480.19 in facilities meets today's DOE-wide performance standards based on the Assessment Team's experience with Rocky Flats, Pantex, and Savannah River Conduct of Operations Program performance.

## Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-2/Lockout-Tagout

page 2

Review Area: Conduct of Operations Implementation; Lockout/Tagout

Responsible Individual: L. D. Butler

## IV. Approach:

(List the procedures and documents reviewed, names and titles of personnel interviewed, references used, and evolutions observed.)

## Records Reviewed:

Lockout/Tagout Log in 9215 MAA M-Wing  
Lockout/Tagout Log in 9720-5  
Lockout/Tagout Log in 9204-4  
Lockout/Tagout Log in 9204-2E  
Lockout/Tagout Log in 9998  
Lockout/Tagout Procedure Y70-527  
Proposed Lockout/Tagout Procedure IS-107

## Interviews Conducted:

9720-5 Facility Support Engineer  
9215 Building Manager  
9215 Maintenance Coordinator

## Evolutions Observed:

Hanging of Lockout/Tagout in preparation for electrical maintenance in 9720-5  
Inspection of existing lockout/tagout in 9201-5

## V. Discussion of Results with Basis:

(Document the results of the review in sufficient detail using both the review criteria and the expectation statement as guidance.)

Lockout/Tagout logs reviewed are being maintained in accordance with procedure Y70-527 with the exception that record of audit could not be located in one facility. Procedures are followed when hanging locks and tags. Lack of component labeling greatly increases the difficulty of ensuring complete coverage and hanging of locks and tags on the correct component.

## VI. Conclusion:

(Concluding statement based on the discussion of results. The statement should conclude whether the criteria of the objective was met.)

The Lockout/Tagout program is being administered in accordance with current Y-12 Plant requirements.

Assessment Form 1

Date: 11/7/95

Assessment Form 1 No.: C-COO-2/Lockout-Tagout  
Review Area: Conduct of Operations Implementation; Lockout/Tagout  
Responsible Individual: L. D. Butler

page 3

VII. Issues:

(List any issues identified as part of this review. All issues should also be documented on Assessment Form 2.)

A. There is one finding:

Locking devices used in one lockout/tagout were improperly installed.  
(Form 2, C-COO-2/Lockout-Tagout-1)

B. There is one concern:

Some deficiencies were noted during the hanging of a lockout/tagout.  
(Form 2, C-COO-2/Lockout-Tagout-2)

C. There are two observations:

1. Record of Lockout/Tagout Audits for 9720-5 could not be located.  
(Form 2, C-COO-2/Lockout-Tagout-3)
2. Review of Lockout/Tagout Log in 9998. (Form 2, C-COO-2/Lockout-Tagout-4)

Originator

L. D. Butler

Date

11/8/95

Approved

D. B. Bray

Date

11/9/95

Assessment Form 2

Date: 11/3/95

Assessment Form 2 No.: C-COO-2/Lockout/Tagout-1  
 Review Area: Installed Lockout/Tagout in 9201-5  
 Responsible Individual: J. Angelo

page 1

**Finding** -- A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.  
**Concern** -- Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.  
**Observation** -- Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.  
**Noteworthy Practices** -- Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

**I. Identification Section**

**A. Statement**

(Provide exact wording of the potential or final **Finding**, Concern, Observation or Noteworthy Practice):

A lockout of steam valves on the first floor at Column C-8 was ineffective. Movement of the valves would not be prevented as locked.

**B. Information Requested**

(List any information needed to further evaluate this item):

None.

**II. Basis Section**

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
 For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
 For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
 For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

**A. Description of Basis:**

Lockout/Tagout Procedure Y70-527

**B. Documents reviewed, activities performed, persons contacted (include titles):**

Assessment Form 2

Date: 11/3/95

Assessment Form 2 No.: C-COO-2/Lockout/Tagout-1  
Review Area: Installed Lockout/Tagout in 9201-5  
Responsible Individual: J. Angelo

page 2

III. Approval Section (Signatures)

Originator J. W. Angelo *DBB* *FOR* Date 11/9/95

Approved *DBB* Date 11/9/95

Suggested Corrective Action:

Install locking devices properly to prevent valve movement.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_



Assessment Form 2

Date: 11/1/95

Assessment Form 2 No.: C-COO-2/Lockout/Tagout-2

page 1

Review Area: Observation of the Hanging a Lockout/Tagout prior to Maintenance.

Responsible Individual: L. D. Butler

**Finding** -- A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** -- Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** -- Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** -- Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

The hanging of a lockout/tagout prior to maintenance was observed. The following items were noted:

1. Labeling of the switch on which tag and lock number 1 were hung did not match the label on the box for which the energy was isolated. Workers were confident it was the same because "they had run the cable for that box".
2. Labels were not permanent. They were of dynatape.
3. Person hanging tags signed the tag before positioning the breaker and hanging the tag and lock. He signed the permit after the locks were installed.
4. The electrician used both rubber and leather gloves to check voltage inside two switchboxes, but stood on a damp surface each time.

B. Information Requested

(List any information needed to further evaluate this item):

Assessment Form 2

Date: 11/1/95

Assessment Form 2 No.: C-COO-2/Lockout/Tagout-2

page 2

Review Area: Observation of the Hanging a Lockout/Tagout prior to Maintenance.

Responsible Individual: L. D. Butler

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).

For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.

For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.

For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

Lockout/Tagout Procedure, Y70-527

B. Documents reviewed, activities performed, persons contacted (include titles):

III. Approval Section (Signatures)

Originator L. D. Butler Date 11/1/95

Approved D. B. Bray Date 11/9/95

Suggested Corrective Action:

1. Label components permanently.
2. Specify in procedure when permits and tags should be signed and the significance of the individual's signature.
3. Ensure proper and consistent safety procedures are used when working on or near energized equipment.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

Accepted By: \_\_\_\_\_

Date \_\_\_\_\_

Assessment Form 2

Date: 11/4/95

Assessment Form 2 No.: C-COO-2/Lockout/Tagout Program-3

page 1

Review Area: Lockout/Tagout Logs

Responsible Individual: L. D. Butler

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation, or Noteworthy Practice):

Lockout/Tagout logs in 9215, 9720-5, 9204-4, and 9204-2E were reviewed. One administrative deficiency was noted: The record of Lockout/Tagout audits for 9720-5 could not be located.

B. Information Requested

(List any information needed to further evaluate this item):

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).

For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.

For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.

For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

1. DOE Order 5480.19, Chapter 9
2. Health and Safety Procedure Y70-527

B. Documents reviewed, activities performed, persons contacted (include titles):

Assessment Form 2

Date: 11/4/95

Assessment Form 2 No.: C-COO-2/Lockout/Tagout Program-3

page 2

Review Area: Lockout/Tagout Logs

Responsible Individual: L. D. Butler

III. Approval Section (Signatures)

Originator L. D. Butler Date 11/4/95

Approved D. B. Bray Date 11/9/95

Suggested Corrective Action:

Locate the 9720-5 audit record or conduct an audit.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

Assessment Form 2

Date: 10/31/95

Assessment Form 2 No.: C-COO-2/Lockout-Tagout-4

page 1

Review Area: Lockout/Tagout log in 9998

Responsible Individual: J. Angelo

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.  
**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.  
**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.  
**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

Lockout Tagout Log in 9998 was reviewed. No deficiencies noted. The person authorized to sign for tags (issuing authority) understood his responsibilities. Audits were up to date.

B. Information Requested

(List any information needed to further evaluate this item):

None.

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
 For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
 For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
 For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

1. DOE Order 5480.19, Chapter 9
2. Y-70-527

B. Documents reviewed, activities performed, persons contacted (include titles): Mike Tillman

Assessment Form 2

Date: 10/31/95

Assessment Form 2 No.: C-COO-2/Lockout-Tagout-4

page 2

Review Area: Lockout/Tagout log in 9998

Responsible Individual: J. Angelo

III. Approval Section (Signatures)

Originator DBB/FOR J. W. Angelo Date 11/9/95

Approved DBB Date 11/9/95

Suggested Corrective Action:

N/A

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

## Assessment Form 1

Date: 11/6/95

Assessment Form 1 No.: C-COO-3/Lockout-Tagout  
Review Area: Corrective Actions Effectiveness  
Responsible Individual: L. D. Butler

page 1

**I. Performance Objective: C-COO-3**

(List the Performance Objective number and description from the Assessment Program)

The corrective actions planned and accomplished by the contractor have been adequate and effective in addressing Conduct of Operations deficiencies.

**II. Expectations:**

(Provide the expectations for the Performance Objective as stated in the Assessment Program)

Upon completion of Performance Objective C-COO-3, the Assessment Team should be able to determine if:

- a. Conduct of Operations corrective actions taken and planned are adequate based on the root cause.
- b. Conduct of Operations corrective actions completed have been effective in improving work force performance.

**III. Review Criteria:**

(Provide the criteria used for conducting the review.)

The corrective actions taken to date have been adequate and have been effective in implementing positive change in the work force in Conduct of Operations.

**IV. Approach:**

(List the procedures and documents reviewed, names and titles of personnel interviewed, references used, and evolutions observed.)

**Records Reviewed:**

"Status of Conduct of Operations Program in Response to DNFSB 94-4", Y/NO-00003 of May 25, 1995.

**Interviews Conducted:**

None

**Evolutions Observed:**

None

Assessment Form 1

Date: 11/6/95

Assessment Form 1 No.: C-COO-3/Lockout-Tagout  
Review Area: Corrective Actions Effectiveness  
Responsible Individual: L. D. Butler

page 2

V. Discussion of Results with Basis:

(Document the results of the review in sufficient detail using both the review criteria and the expectation statement as guidance.)

There were no corrective actions identified in previous Conduct of Operations assessments that needed to be verified.

VI. Conclusion:

(Concluding statement based on the discussion of results. The statement should conclude whether the criteria of the objective was met.)

None

VII. Issues:

(List any issues identified as part of this review. All issues should also be documented on Assessment Form 2.)

None

Originator

L. D. Butler

Date

11/6/95

Approved

DBB

Date

11/9/95



## Assessment Form 1

Date: 11/8/95

Assessment Form 1 No.: C-COO-1/Training and Drills  
Review Area: Conduct of Operations Program – Training Program  
Responsible Individual: G. E. Francis

page 1

**I. Performance Objective: C-COO-1**

(List the Performance Objective number and description from the Assessment Program)

The requirements of DOE Order 5480.19 have been adequately planned for implementation and will be of a level of quality required by today's performance standards complex-wide.

**II. Expectations:**

(Provide the expectations for the Performance Objective as stated in the Assessment Program)

Upon completion of Performance Objective C-COO-1, the Assessment Team should be able to determine if:

- a. The Y-12 Plant Conduct of Operations Program as planned and being implemented will be sufficiently comprehensive.
- b. The Y-12 Program will have adequate resources and adequate management involvement.
- c. The Y-12 Program will meet today's DOE-wide standards for an adequate Conduct of Operations Program.

**III. Review Criteria:**

(Provide the criteria used for conducting the review.)

The Conduct of Operations Program at the Y-12 Plant meets today's quality level expected within the DOE-complex. The Program should promote adequate Conduct of Operations performance when implemented.

## Assessment Form 1

Date: 11/8/95

Assessment Form 1 No.: C-COO-1/Training and Drills  
Review Area: Conduct of Operations Program – Training Program  
Responsible Individual: G. E. Francis

page 2

**IV. Approach:**

(List the procedures and documents reviewed, names and titles of personnel interviewed, references used, and evolutions observed.)

**Records Reviewed:**

- Training records for shift manager and shift technician advisor for Bldg. 9204-4
- Training development materials

**Interviews Conducted:**

- Shift manager Bldg. 9204-4
- Shift technical advisor 9204-4
- Mentor Bldg. 9204-4
- Training mentor
- Nuclear Operations Qualification and Procedures Manager

**Evolutions Observed:**

- Training sessions
- Pre-shift briefings
- OJT walkthrough and validation
- Drills

**Assessment Form 1**

Date: 11/8/95

**Assessment Form 1 No.: C-COO-1/Training and Drills**  
**Review Area: Conduct of Operations Program – Training Program**  
**Responsible Individual: G. E. Francis**

page 3

**V. Discussion of Results with Basis:**

(Document the results of the review in sufficient detail using both the review criteria and the expectation statement as guidance.)

The training organization at Y-12 is fragmented in that each Division (EU, DU, etc.) has its own training manager. The division training manager is responsible for identifying training requirements and scheduling personnel for training at the Center for Continuing Training operated off site by the Energy Systems Group. There is no overall training manager for the site. The training managers for the divisions within Nuclear Operations report to their Division Directors. A new position has been established to coordinate the efforts of the Nuclear Operations organization. This new position has the title of Nuclear Operations Qualification and Procedures Manager. This new position has been assigned the mission of establishing standards for training, qualification, and procedures within the Nuclear Operations organization. The new manager has been in this position only a few months. There are several support contractors dedicated to producing or upgrading training and qualification materials.

Observations in the field at Y-12 demonstrate that the standardization of training and qualification materials is needed. There is no standard qualification process. Qualification cards have been developed but are not standardized. There is no master plan for coordinating the contractor efforts within the training organization. The roles and responsibilities of the Division training managers and the Nuclear Operations Qualification and Procedures Manager have not been defined.

The procedure defining the Plant training requirements (Y10-27) contains the necessary direction for an adequate program. The activity described in the plant procedure will not happen properly until a Y-12 Training Manager with overall responsibility for the program is assigned.

Three drills were also observed as part of the Conduct of Operations training assessment activities at Y-12. The issues with the drill program include the assessment that the drill program, as demonstrated, was immature and prevented the proper evaluation of the participants due to excessive prealertment. Limited training value will be achieved using this program of drills. Many recommended improvements to the drill program were shared by team members during the pre-drill briefs and post-drill critiques.

**VI. Conclusion:**

(Concluding statement based on the discussion of results. The statement should conclude whether the criteria of the objective was met.)

The criteria for this objective was partially met in that a procedure exists that describes the training program but there is no site infrastructure to implement the procedures.

Assessment Form 1

Date: 11/8/95

Assessment Form 1 No.: C-COO-1/Training and Drills  
Review Area: Conduct of Operations Program - Training Program  
Responsible Individual: G. E. Francis

page 4

VII. Issues:

(List any issues identified as part of this review. All issues should also be documented on Assessment Form 2.)

Finding:

- (1) Shift manager and shift technical advisor qualification process is not documented. (Form 2 C-COO-1/Training and Drills-1)

Concerns:

- (1) The site lacks the infrastructure to support a training program (Form 2 C-COO-1/Training and Drills-2).
- (2) The Training Program does not take credit for actual events (Form 2 COO-1/Training and Drills-3).

Originator

G. E. Francis

Date

11/9/95

Approved

*DalBoay*

Date

11/9/95

## Assessment Form 2

Date: 11/2/95

Assessment Form 2 No.: C-COO-1/Training and Drills-1  
Review Area: Training Status in 9204-4  
Responsible Individual: G. Francis

page 1

**Finding** -- A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.  
**Concern** -- Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.  
**Observation** -- Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.  
**Noteworthy Practices** -- Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

## I. Identification Section

## A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

**Finding:** Qualification process for shift manager and shift technical advisor (STA) is incomplete. There is no qualification standard package (e.g., qualification standard, cards and program description) in place.

## B. Information Requested

(List any information needed to further evaluate this item):

- Interview with Training Manager
- Review pilot program started in EUO

Assessment Form 2

Date: 11/2/95

Assessment Form 2 No.: C-COO-1/Training and Drills-1  
 Review Area: Training Status in 9204-4  
 Responsible Individual: G. Francis

page 2

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
 For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
 For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
 For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

DOE Orders 5480.19 and 5480.20A

B. Documents reviewed, activities performed, persons contacted (include titles):

Records reviewed:

Qualification records of a Shift Technical Advisor in 9204-4

Interviews conducted:

Shift Manager 9204-4  
 Nuclear Operations Qualifications and Procedures Manager

III. Approval Section (Signatures)

Originator  Date 11/2/95

Approved  Date 11/9/95

Suggested Corrective Action:

Establish a process and develop qualification materials for key positions of shift manager, STA, and others as appropriate.

Assessment Form 2

Date: 11/2/95

Assessment Form 2 No.: C-COO-1/Training and Drills-1  
Review Area: Training Status in 9204-4  
Responsible Individual: G. Francis

page 3

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1/Training and Drills-2

page 1

Review Area: Training Infrastructure

Responsible Individual: G. E. Francis

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern Observation or Noteworthy Practice):

Concern: The training infrastructure is fragmented and will not support the current requirements of the site in that:

- There is no overall Site Training Manager
- Training roles and responsibilities are not implemented in accordance with the procedure
- Multiple contracts have been let to develop training materials in an uncoordinated manner.
- No overall plan has been developed to bring the training program up to industry standards.

B. Information Requested

(List any information needed to further evaluate this item):



## Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1/Training and Drills-2

page 2

Review Area: Training Infrastructure

Responsible Individual: G. E. Francis

## II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).

For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.

For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.

For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

## A. Description of Basis:

Plant Training Procedure Y10-27

## B. Documents reviewed, activities performed, persons contacted (include titles):

## Records Reviewed:

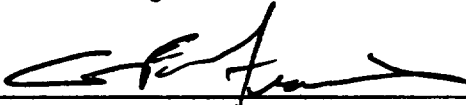
- Training Materials
- Drill Guides

## Interviews Conducted:

- Nuclear Operations Qualification and Procedures Manager

## III. Approval Section (Signatures)

Originator



Date

11/6/95

Approved



Date

11/9/95

## Suggested Corrective Action:

- Assign a Site Training Manager
- Define roles and responsibilities for the training organization
- Develop plans to implement the Plant Training Procedure

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-1/Training and Drills-2

page 3

Review Area: Training Infrastructure

Responsible Individual: G. E. Francis

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_

Date \_\_\_\_\_

## Assessment Form 2

Date: 11/1/95

Assessment Form 2 No.: C-C00-1/Training and Drills-3

page 1

Review Area: Training Program Development

Responsible Individual: W. A. Condon

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

## I. Identification Section

## A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

**Observations:** Training program does not take credit for actual events which occur in the facility. During the facility assessment, an actual CSA violation was identified. The observed facility response was excellent, however, no attempt was made to review the response for adequacy, identify lessons learned, or to provide feedback to facility personnel on their actions.

**Background:** At 08:10 on 11/1/95 a 9204-2E operator identified a CSA violation. The CSA violation consisted of a sealed bag of contaminated combustible material which was improperly stored and crossed the boundary of the array in which it was stored. The operator immediately established a 15 foot perimeter, and notified his supervision. The Nuclear Criticality Safety Division (NCSD) was notified and NCSD personnel arrived on the scene within 10 minutes. The criticality engineer assessed the CSA violation and provided written guidance for corrective action, which was quickly implemented.

**Relevant facts:**

- No assessment was conducted to evaluate response to the CSA violation for adequacy.
- No feedback was provided to facility personnel to ensure continued adequate performance or correction of inadequate performance as appropriate.

## B. Information Requested

(List any information needed to further evaluate this item):

None.

## Assessment Form 2

Date: 11/1/95

Assessment Form 2 No.: C-C00-1/Training and Drills-3

page 2

Review Area: Training Program Development

Responsible Individual: W. A. Condon

## II. Basis Section

**For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).**

**For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.**

**For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.**

**For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.**

## A. Description of Basis:

Assessments of actual events provide management with indications of personnel understanding of program requirements. Failure to capture and assess actual response could allow program weaknesses to continue undetected.

## B. Documents reviewed, activities performed, persons contacted (include titles):

Activities

Observation of CSA violation and subsequent facility response

Persons

9204-2E Operations Manager

9204-2E Shift Manager

NCS D Personnel

Assessment Form 2

Date: 11/1/95

Assessment Form 2 No.: C-C00-1/Training and Drills-3

page 3

Review Area: Training Program Development

Responsible Individual: W. A. Condon

III. Approval Section (Signatures)

Originator W A Condon Date 11/8/95

Approved Darrell Boy Date 11/9/95

Suggested Corrective Action:

- Develop lessons learned program which evaluates actual occurrences against expected facility response.
- Develop lessons learned program which provides feedback to facility personnel on their performance, adequate or inadequate.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

**Assessment Form 1**

Date: 11/8/95

**Assessment Form 1 No.: C-COO-2/Training and Drills**  
**Review Area: Conduct of Operations Training Implementation**  
**Responsible Individual: G. E. Francis**

page 1**I. Performance Objective: C-COO-2**

(List the Performance Objective number and description from the Assessment Program)

The quality level of implementation of DOE Order 5480.19 in facilities is adequate based on today's DOE-wide performance standards.

**II. Expectations:**

(Provide the expectations for the Performance Objective as stated in the Assessment Program)

Upon completion of Performance Objective C-COO-2, the Assessment Team should be able to determine the quality level of the implemented Conduct of Operations elements relative to benchmarked programs and to determine if:

- a. Ownership and understanding of Conduct of Operations requirements by the work force are adequate based on today's standards.
- b. Work is conducted according to Conduct of Operations requirements.

**III. Review Criteria:**

(Provide the criteria used for conducting the review.)

The quality level of implemented elements of DOE Order 5480.19 in facilities meets today's DOE-wide performance standards based on the Assessment Team's experience with Rocky Flats, Pantex, and Savannah River Conduct of Operations Program performance.

**Assessment Form 1**

Date: 11/8/95

Assessment Form 1 No.: C-COO-2/Training and Drills  
Review Area: Conduct of Operations Training Implementation  
Responsible Individual: G. E. Francis

page 2

**IV. Approach:**

(List the procedures and documents reviewed, names and titles of personnel interviewed, references used, and evolutions observed.)

**Records Reviewed:**

- Nuclear Operations Conduct of Operations manual and attachments (Implementation Plans)

**Interviews Conducted:**

Nuclear Operations Qualifications and Procedures Manager  
Training mentor  
Bldg. 9204-4 mentor  
Bldg. 9204-4 Shift Technical Advisor

**Evolutions Observed:**

- Fire extinguisher training session
- Required reading training session
- Pre-shift briefings in multiple facilities

**V. Discussion of Results with Basis:**

(Document the results of the review in sufficient detail using both the review criteria and the expectation statement as guidance.)

The training being implemented at Y-12 reflects the fragmented program infrastructure. The team observed a variety of training activities with a variety of results due to a lack of standardization. Many of the expected elements of a mature training program are not available. There is no qualification card or standard for Shift Managers or Shift Technical Advisors as required by the Conduct of Operations manual. There is no evidence of the routine continuing training being conducted in accordance with the plant training procedure Y10-27.

Three drills were observed as evidence of training during the assessment. The method used to initiate and control the drills caused excessive pre-alertment of the drills and prevented an evaluation of the response of operations and support personnel to the drill scenario. Excessive prompting and coaching of participants was observed during the drills.

The overall training implementation is well behind that of other DOE Sites and should be a priority for organization and structure to support the implementation of a Conduct of Operations culture at Y-12.

Assessment Form 1

Date: 11/8/95

Assessment Form 1 No.: C-COO-2/Training and Drills  
Review Area: Conduct of Operations Training Implementation  
Responsible Individual: G. E. Francis

page 3

VI. Conclusion:

(Concluding statement based on the discussion of results. The statement should conclude whether the criteria of the objective was met.)

Training implementation criteria is partially met in that training is being conducted but is not standardized.

VII. Issues:

(List any issues identified as part of this review. All issues should also be documented on Assessment Form 2.)

Findings

- Continuing training is not being conducted in facilities in accordance with Chapter 12 of Nuclear Operation Conduct of Operations Manual (Form 2 C-COO-2/Training and Drills-1 and 8).
- Personnel serving as shift manager and shift technical advisor are not formally qualified (Form 2 C-COO-2/Training and Drills-2)
- Training is not effective in helping operators retain important information (Form 2 C-COO-2/Training and Drills 4)

Concerns

- Training is not conducted formally (Form 2 C-COO-2/Training and Drills-3)
- Drills need improvement  
Form 2 C-COO-2/Training and Drills 5  
C-COO-2/Training and Drills 6  
C-COO-2/Training and Drills 7

Originator *G. E. Francis* Date 11/9/95

Approved *D. B. Bray* Date 11/9/95



Assessment Form 2

Date: 11/3/95

Assessment Form 2 No.: C-COO-2/Training and Drills-1  
 Review Area: Continuing Training Program  
 Responsible Individual: G. Francis

page 1

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.  
**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.  
**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.  
**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

Finding

A comprehensive continuing training program is not in place to implement conduct of operations.

As shown at other DOE locations there is a need to socialize the new culture of conduct of operations. The managers of each work group must share their understanding of the requirements and their expectations of performance. This can best be done through frequent, routine management lead continuing training sessions.

B. Information Requested

(List any information needed to further evaluate this item):

None

Assessment Form 2

Date: 11/3/95

Assessment Form 2 No.: C-COO-2/Training and Drills-1

page 2

Review Area: Continuing Training Program

Responsible Individual: G. Francis

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).

For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.

For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.

For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

DOE Order 5480.19 and 5480.20A

B. Documents reviewed, activities performed, persons contacted (include titles):

Records reviewed:

- Timely orders to operators
- Required reading
- Operator aids
- Plan of the day
- Status boards

Interviewed conducted:

- Mentor Bldg. 9204-4
- Shift Mgr. Bldg. 9204-4
- STA Bldg. 9204-4

Evolutions observed:

- Pre-shift brief
- POD meeting
- Pre-evolution brief
- CAAS surveillance

Assessment Form 2

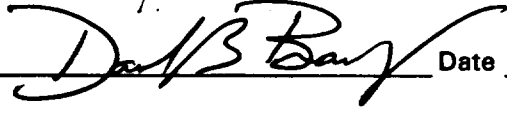
Date: 11/3/95

Assessment Form 2 No.: C-COO-2/Training and Drills-1  
Review Area: Continuing Training Program  
Responsible Individual: G. Francis

page 3

III. Approval Section (Signatures)

Originator  Date 11/3/95

Approved  Date 11/9/95

Suggested Corrective Action:

Commence management lead continuing training sessions for work groups on a frequent, routine basis, use training material from mentors and training department.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

Assessment Form 2

Date: 11/8/95

Assessment Form 2 No.: C-COO-2/Training and Drills-2  
Review Area: Training Status in 9204-4  
Responsible Individual: G. Francis

page 1

**Finding** -- A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.  
**Concern** -- Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.  
**Observation** -- Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.  
**Noteworthy Practices** -- Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

I. Identification Section

A. Statement

(Provide exact wording of the potential or Final Finding, Concern, Observation or Noteworthy Practice):

**Finding:** Personnel serving as Shift Manager and Shift Technical Advisor are not formally qualified.

B. Information Requested

(List any information needed to further evaluate this item):

- Interview with Training Manager

Assessment Form 2

Date: 11/8/95

Assessment Form 2 No.: C-COO-2/Training and Drills-2  
Review Area: Training Status in 9204-4  
Responsible Individual: G. Francis

page 2

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

DOE Orders 5480.19 and 5480.20A

B. Documents reviewed, activities performed, persons contacted (include titles):

Records reviewed:

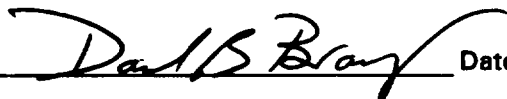
Qualification records of a Shift Technical Advisor in 9204-4

Interviews conducted:

Shift Manager 9204-4  
Nuclear Operations Qualifications and Procedures Manager

III. Approval Section (Signatures)

Originator  Date 11/8/95

Approved  Date 11/9/95

Suggested Corrective Action:

Develop and implement a qualification program that meets the requirements of DOE Order 5480.2A.

**Assessment Form 2**

**Date: 11/8/95**

**Assessment Form 2 No.: C-COO-2/Training and Drills-2**

**page 3**

**Review Area: Training Status in 9204-4**

**Responsible Individual: G. Francis**

**IV. Contractor/DOE Response**

*(Provide results of Contractor/DOE review with technical basis and references.)*

**N/A**

**Accepted By: \_\_\_\_\_**

**Date \_\_\_\_\_**

## Assessment Form 2

Date: 11/3/95

Assessment Form 2 No.: C-COO-2/Training and Drills-3

page 1

Review Area: Training Lecture

Responsible Individual: L. D. Butler

**Finding** -- A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** -- Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** -- Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** -- Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

**I. Identification Section****A. Statement**

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

- Unverified information, not part of the plan of instruction, was added by the instructor at the end of a Fire Extinguisher Use training session conducted in Building 9212 for EUO personnel.
- At the end of a NFPA video tape showing proper fire extinguisher use, the instructor stated that dry chemical extinguishers should be inverted and banged with a hammer once per year to prevent the chemical from being packed down. This information was not part of the plan of instruction and may be incorrect.

**B. Information Requested**

(List any information needed to further evaluate this item):

Assessment Form 2

Date: 11/3/95

Assessment Form 2 No.: C-COO-2/Training and Drills-3 page 2  
Review Area: Training Lecture  
Responsible Individual: L. D. Butler

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

DOE Order 5480.19  
DOE Order 5480.20A

B. Documents reviewed, activities performed, persons contacted (include titles):

NFPA film on fire extinguisher use

III. Approval Section (Signatures)

Originator L. D. Butler Date 11/3/95

Approved Dan B. Bay Date 11/9/95

Suggested Corrective Action:

Instructors should cover only material that is in an approved plan of instruction.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_



## Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-2/Training and Drills-4

page 1

Review Area: Training Program

Responsible Individual: W. A. Condon

**Finding** – A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** – Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** – Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** – Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

## I. Identification Section

## A. Statement

(Provide exact wording of the potential or final **Finding**, Concern, Observation or Noteworthy Practice):

**Finding:** The facility training program is ineffective.

**Background:** A recent revision to CSA B2E-12 was completed during the week ending November 3, 1995. The basic change was to add a new type of storage container and delete various storage containers which were no longer in use in the facility (other formatting/editorial-type changes were also made). Formal training on the revision was conducted on 11/2 and 11/3. When questioned on 11/6, five facility employees could not describe the revisions in any detail. Employees acknowledged receiving training. CSA B2E-12 is a list of containers, approved for use within the facility. The Assessment Team member only attempted to assess employee awareness of (1) the revision had been completed, and (2) a new container was approved for use in the facility. Employees were not expected to respond beyond these details and were not requested to identify actual changes in the CSA or to specifically identify the new container.

## B. Information Requested

(List any information needed to further evaluate this item):

None

Assessment Form 2

Date: 11/6/95

Assessment Form 2 No.: C-COO-2/Training and Drills-4  
Review Area: Training Program  
Responsible Individual: W. A. Condon

page 2

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

Facility training on CSA revision was not sufficient to ensure employee understanding and compliance.

B. Documents reviewed, activities performed, persons contacted (include titles):

Personnel interview with five 9204-2E employees

III. Approval Section (Signatures)

Originator W A Condon Date 11/8/95

Approved Dan B Bay Date 11/9/95

Suggested Corrective Action:

Strengthen training process to ensure training has specific objectives and promotes employee understanding and retention.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

## Assessment Form 2

Date: 11/1/95

Assessment Form 2 No.: C-COO-2/Training and Drills-5

page 1

Review Area: Drills-CSA Violation

Responsible Individual: J. Angelo

**Finding** -- A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** -- Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** -- Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** -- Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

## I. Identification Section

## A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

A CSA violation drill was conducted by plant management. A number of deficiencies were noted by the contractor drill team. Additional deficiencies were noted by Assessment Team observers.

## Contractor Comments/FR Comments

- Execution was not as planned. The second player was unable to come to the scene until late in the drill.
- Forceful and effective communications were lacking initially. Observers were asked to participate.
- Two maintenance personnel failed to recognize the CSA violation and approached within 5 feet of the drum. Prompting by the drill monitor was required for them to back off to 15 feet away from the drum.
- One Assessment Team observer went inside the 15 foot boundary and was not challenged. (Editorial Note: During the pre-drill brief, all participants/observers were requested not to violate the 15 foot boundary requirement.)

## Additional Comments from Assessment Team

- The method of initiating the drill pre-alerted the participant and prevented an evaluation of the participant's ability to recognize the CSA violation and an evaluation of his response.
- No physical boundary was ever established or thought about. The drum was left unattended while the personnel who discovered the problem sought assistance.
- No one announced that he/she was "in charge" before NCSO effectively took control at the scene.
- Observers were unnecessarily limited by the 15 foot boundary.
- Drill reference materials were not available in the critique or the pre-brief (OSRs/CSAs/logs).
- Drill start time should be decided and watches should be synchronized.
- Excessive "guidance and coaching" were observed. A participant asked a drill monitor for information, which was provided, instead of relying on his own observations.
- The public address (PA) system was not used to announce the casualty or abnormal situation. When used, the PA system could not be understood.
- The drill brief did not include lessons learned from previous drills.
- Consider including the drill participants in the drill debrief as a routine to assist with their training and knowledge of casualty response.

## B. Information Requested

(List any information needed to further evaluate this item):

Assessment Form 2

Date: 11/1/95

Assessment Form 2 No.: C-COO-2/Training and Drills-5  
Review Area: Drills-CSA Violation  
Responsible Individual: J. Angelo

page 2

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria). For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems. For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance. For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

CSA violations are OSR violations as specified in Y/TS-1314. Drills are conducted per DOE Order 5480.19.

B. Documents reviewed, activities performed, persons contacted (include titles):

- Y/TS-1314
- Drill Guide
- Deputy Manager for Nuclear Operations, the Operations Manager, and the Shift Manager were contacted.

III. Approval Section (Signatures)

Originator *J. Angelo for* Date 11/9/95  
 J. W. Angelo

Approved *Dalby* Date 11/9/95

Suggested Corrective Action:

Upgrade drill program to industry standard

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

Assessment Form 2

Date: 11/3/95

Assessment Form 2 No.: C-COO-2/Training and Drills-6  
Review Area: DRILL/Hazardous Material Spill  
Responsible Individual: L. D. Butler

page 2

II. Basis Section

For Findings, identify the related requirements (e.g., applicable DOE Orders, Standards or Review Criteria).  
For Concerns, discuss how the situation results in less than optimal performance and is considered an indicator of more serious problems.  
For Observations, identify the situation worthy of raising to the attention of site management and discuss how it will enhance overall performance.  
For Noteworthy Practices, identify those practices considered notable and that have general application to other DOE facilities for the improvement of overall safety or performance.

A. Description of Basis:

DOE Order 5480.19, Chapter 1

B. Documents reviewed, activities performed, persons contacted (include titles):

Hazardous Material Spill Drill, including Pre-Drill Brief, and Post Drill Critique

III. Approval Section (Signatures)

Originator *L. D. Butler* Date 11/3/95

Approved *D. G. Bay* Date 11/9/95

Suggested Corrective Action:

Upgrade drill program to industry standards.

IV. Contractor/DOE Response

(Provide results of Contractor/DOE review with technical basis and references.)

N/A

Accepted By: \_\_\_\_\_ Date \_\_\_\_\_

## Assessment Form 2

Date: 11/7/95

Assessment Form 2 No.: C-COO-2/Training and Drills-7

page 1

Review Area: Drill - Fire

Responsible Individual: G. Francis

**Finding** - A statement of fact documenting a deviation from an applicable Federal law, DOE Order, standard, safety requirement, performance standard, or approved procedure.

**Concern** - Any situation while not in violation of any written procedure, in the judgment of the assessment team member indicates less than optimal performance and could be the indicator of more serious problems.

**Observation** - Any situation while not in violation of any written procedure or requirement, in the judgment of the assessment team member is worthy of raising to the attention of site management in order to enhance overall performance.

**Noteworthy Practices** - Practices that are notable and will have general application to other DOE facilities for the improvement of overall safety or performance.

## I. Identification Section

## A. Statement

(Provide exact wording of the potential or final Finding, Concern, Observation or Noteworthy Practice):

Concern: A fire drill was held in the office spaces of building 9720-5 on 11/2/95.

The LMES evaluators had the following comments:

- Some confusion existed among the facility management on achieving accountability status for the evacuated building.
- Manpower was limited for several activities (e.g. pump operator).
- The Fire Department Safety Officer was distracted from his primary duties to check into the accountability problem.
- Building security personnel were not included in either the building or fire department pre-evolution briefs.
- The 5" LDH supply hose had a kink which should have been corrected prior to pressurizing the hose.
- The pump operator needed help to complete his tasks.
- Overall, the drill objectives were met and the drill was evaluated as satisfactory.

The Assessment Team noted the following additional comments:

- The open bay in the fire station used for the pre-evolution brief and critique was inadequate. It was difficult to hear above the background noise.
- Assignment of drill monitors/initiators and safety observers was not made at pre-evolution brief.
- Many problems were noted in the manner in which the fire drill was conducted:
  - There was no simulation of the source or type of fire.
  - There were no simulations provided on the master fire panel to indicate the location of the fire.
  - There were no cues about the injured person.
- The drill did not exercise building personnel in detecting and reporting a fire. A drill monitor reported the fire instead. Both the telephone report and building public address system announcement were made using written scripts prepared for the drill.
- Response to the fire was slower than routinely observed at other sites. (16 minutes from time of the initial report until fire fighting efforts commenced.)
- There was no turnover of building status from Operations personnel to the Incident Commander (Fire Captain) as is common at other DOE sites.
- The personnel accountability procedure was not adequately tested. Participants were pre-alerted that a person on vacation/out sick would be simulated as missing or injured. As a result, there was confusion as to which of two personnel was the simulated victim.
- There was good performance by the assembly area director and accountability coordinator in exercising their checklists. The checklists were adequate.
- The fire hose in use was examined for evidence of testing. One of the five segments had not received annual testing since 1993.